

2017

The work-family interface and burnout in sole and partnered working Australian mothers

Laura Denise Robinson
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THE WORK-FAMILY INTERFACE AND BURNOUT IN SOLE AND PARTNERED WORKING AUSTRALIAN MOTHERS

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**A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
THE DEGREE
DOCTOR OF PHILOSOPHY**

The University of Wollongong
School of Psychology
2017

CERTIFICATION

I, Laura Denise Robinson, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, School of Psychology, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other institution.

Laura Denise Robinson

March 2017

ACKNOWLEDGEMENTS

My deepest thanks go to my PhD supervisors – Chris and Peter. Thank you for your support, patience, sense of humour, and guidance over the years. Your ongoing support and belief in me has helped me achieve more than I thought possible.

Thank you to my friends, for listening and for supporting me, you know who you are. For Tuesday morning coffees. A special mention to my running buddies who were stuck listening to my woes on our long Saturday morning runs. And to my peers, for sharing the journey with me and for those who graduated ahead of me, for showing me that when times get hard that indeed ‘this too shall pass’.

Finally, thank you to my family. Mum and Dad for installing in me early that “Attitude Governs Altitude”, for living lives where you accept and take on challenges, and your unwavering belief and supporting me in all that I do. My brother Simon and sister Amy who are both very influential in my life, and always being there to share the ups and downs with me. To my boys, Lachlan, Angus and Hamish, thank you for being you, helping me keep things in perspective, and for accepting that your mum is as the one carrying her laptop to hockey games in order to get some study done. It is both a joy and privilege to have you in my life.

THESIS STYLE

This doctoral thesis is presented as a collection of manuscripts prepared for publication (Style 2). Each chapter represents a manuscript written for a certain journal, with specific aims, conclusions and implications. The structure of the abstract and headings within each paper is consistent with the style used by the journal for which it is written. Chapter 2 has been submitted to the Journal of Family Theory and Review; Chapter 3 has been published in Women's Studies International Forum; Chapter 4 has been published in Career Development International; Chapter 5 has been submitted to Personality and Individual Differences and is under review; and Chapter 6 has been published in the Journal of Managerial Psychology. Each journal requires a specific referencing style which has been applied to the relevant chapter.

ABSTRACT

Building a career and raising a family is a significant challenge presently facing many women, including sole mothers who represent a growing proportion of the working population. The work-family interface is an important area of research because work and family experiences can have a harmful effect on health outcomes and functioning, such as burnout (a process resulting from prolonged exposure to stress that promotes physical, emotional and cognitive exhaustion). Work-family conflict (WFC) is a widely examined component of the work-family interface and refers to a form of inter-role conflict that occurs when the demands of work are incompatible with the role pressures from the family domain. Many studies indicate that WFC predicts a range of adverse outcomes including burnout and poor health. However, it is also recognised that work experiences can have an enriching effect on individuals and their family by promoting positive affect, skill development and providing a sense of fulfilment that promote functioning in the family role. This process is referred to as work-family enrichment (WFE), and predicts a range of positive outcomes including higher life and job satisfaction and good mental health.

While the antecedents and outcomes of WFC and WFE have been widely investigated, few studies have focused on sole mothers in paid employment. More research is needed on sole mothers in the workforce because it is plausible that the challenges and opportunities sole mothers face in combining work and family differ from partnered mothers. This could reflect many factors including the absence of a residential partner to share family obligations, along with other indicators of social disadvantage such as lower household incomes.

The overall aim of this thesis is to investigate the nature and health implications of work-family interface (as reflected by WFC and WFE) in sole working mothers in comparison with partnered working mothers. Furthermore, drawing on Conservation of Resources (COR) theory, this thesis investigates whether underlying differences in resources affect these relationships.

This thesis first presents a systematic review (Chapter 2) on past research studying WFC and WFE (or similar constructs) in working mothers. The review indicated there were only 16 relevant studies in this area. All but one study compared WFC between sole and partnered mothers, and only three studies examined WFE in working mothers. This review also highlighted that there has been little theoretical development to explain potential differences in work-family experiences between sole and partnered mothers. Chapter 2 addresses this limitation by proposing the COR theory as a theoretical framework to guide future research to investigate the work-family interface in sole working mothers.

The empirical chapters (Chapters 3 to 6) present the results of survey research with sole and partnered working mothers in Australia. The first empirical study (Chapter 3) aimed to determine whether mental and physical health differed between sole and partnered mothers who are in paid employment and examines the role of two resources – work hours and social support – on self-reported mental and physical health. Findings showed that sole mothers had poorer physical and mental health than partnered mothers, and that these differences were the most pronounced in working mothers when social support was low and when working less than 21 hours. Chapter 4 investigated whether WFC, WFE and burnout levels differed between sole and partnered mothers and whether WFC and WFE predict burnout over a six-month period. The results indicated that WFC was positively related to burnout, and that the inverse relationship of WFE and personal burnout was significant for partnered mothers only.

Chapter 5 further explored the influence of resources on WFC and WFE and focused on internal locus of control (or internality), which is an important personal resource that may have implications for WFC and WFE. The results of this chapter indicated that internality is positively related to WFE and negatively related to WFC. Furthermore, internality was associated with WFE in sole but not in partnered working mothers.

This thesis also recognises that WFC and WFE are distinct constructs and can co-occur. Accordingly, Chapter 6 used a person-centred method to identify distinct profiles based on WFC and WFE levels and examined whether profiles differed between sole and partnered mothers and in burnout levels. Five distinct work-family profiles were identified with sole mothers more likely to experience a combination of high WFC and low WFE, which was also associated with higher burnout levels.

The final chapter (Chapter 7) presents a synthesis of key findings of the systematic review and the empirical studies. Research limitations are considered, future research areas are proposed, and theoretical and practical implications are discussed.

This thesis makes significant and original contributions to the literature in a number of ways. First, the present research addresses a gap in the literature on the work-family interface of sole working mothers. Second, findings clarify that compared to partnered mothers, sole working mothers are vulnerable to poorer mental health. Third, results show that sole working mothers experience different, and more harmful, combinations of WFC and WFE than partnered mothers. Fourth, that with similar resource levels any differences between sole and partnered mothers in health outcomes are greatly diminished. Next, a key theoretical contribution is made by adopting a theoretical lens to examine the WFC and WFE in sole mothers. The COR theory was proposed as a principal framework for guiding and understanding possible differences between sole and partnered mothers. The main conclusions of this research have significant implications for sole working mothers, their

families, policy makers and organisations.

KEY ABBREVIATIONS

Work-family Conflict	WFC
Work-family Enrichment	WFE
Locus of Control	LOC
Personal burnout	PB
Work burnout	WB
Social support	SS
Conservation of Resources	COR
Latent Profile Analysis	LPA

PUBLICATIONS CONSTITUTING THIS THESIS

Published Manuscripts

- Robinson, L.D., Magee, C.A., & Caputi P. (2014). Social support, work hours and health: A comparative study of sole and partnered Australian mothers. *Women's Studies International Forum*, 42, 19 – 2. (Chapter 3)
- Robinson, L.D., Magee, C.A., & Caputi P. (2016). Burnout and the work-family interface: A two-wave study of sole and partnered working mothers. *Career Development International*, 21(1), 31 – 44. (Chapter 4)
- Robinson, L.D., Magee, C.A., & Caputi P. (2016). Work-to-family profiles, family structure and burnout in mothers. *Journal of Managerial Psychology*, 31(7), 1167 – 1181. (Chapter 6)

Manuscripts Under Review

- Robinson, L.D., Magee, C.A., & Caputi P. (Revision submitted). Sole mothers in the workforce: A review and agenda for future research. *Journal of Family Theory and Review* (Chapter 2)
- Robinson, L.D., Magee, C.A., & Caputi P. (Submitted). Locus of control, work-family conflict and work-family enrichment. A resource-based comparison of sole and partnered mothers. *Personality and Individual Differences*. (Chapter 5)

OTHER CONTRIBUTIONS ARISING FROM THESIS

Robinson, L.D., Caputi, P. & Magee, C. (July, 2012). Sole working mothers, health, and work-family experiences. *Australian Institute of Family Studies Conference*, Melbourne, Australia.

Robinson, L.D., Magee, C.A. & Caputi, P. (July, 2014). Work-to-family enrichment and conflict: Differential influences on burnout in sole and partnered mothers. 28th *International Congress of Applied Psychology*, Paris, France.

Robinson, L.D., Magee, C.A. & Caputi, P. (July, 2015). Work-to-family conflict and enrichment profiles, family types and wellbeing in working mothers. 11th *Industrial and Organisational Psychology Conferences*, Melbourne, Australia.

STATEMENT OF VERIFICATION

This statement verifies that the greater part of the above-named manuscripts is attributed to the candidate. Laura D. Robinson, under the guidance and supervision of her supervisors, took primary responsibility for the design of each study, all data collection and analysis, prepared the first draft of each manuscript, and prepared the papers for submission to relevant journals. Co-authors, who were also supervisors to the candidate, contributed to the thesis by providing guidance on the design and structure of each study, and provided editorial suggestions for every paper.

Laura D. Robinson (PhD Candidate)

Associate Professor Christopher A. Magee (Primary Supervisor)

Professor Peter Caputi (Co-supervisor)

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CHAPTER 1. GENERAL INTRODUCTION

General Introduction

In recent decades, a considerable amount of attention has been placed on work-to-family conflict (WFC) and work-to-family enrichment (WFE) by researchers, policy makers, and organisations. WFC refers to when the demands of work are incompatible with the role pressures from the family domain (Greenhaus & Beutell, 1985); other terms used to describe similar processes include work-family interference and negative spillover (Byron, 2005; McManus, Korabik, Rosin, & Kelloway, 2002). WFE is defined as the process by which resource gains at work are successfully applied to, and enhance, family life (Carlson, Kacmar, Wayne, & Grzywacz, 2006); terms such as work-family enhancement and positive spillover have also been used to explain the positive effects of work on non-working life (McNall, Nicklin, & Masuda, 2010). It is important to note that WFC and WFE are not polar opposites (i.e., they are not two ends of a continuum), but rather are distinct constructs and reflect different underlying processes. Furthermore, there is evidence that WFC and WFE can co-occur (Grzywacz & Marks, 2000), such that individuals can experience high (or low) WFC and WFE simultaneously. A large body of research has indicated that poor health and functioning, such as depression, stress, and absenteeism, are consequences of WFC (Allen, Herst, Bruck, & Sutton, 2000). In contrast, WFE is associated with positive outcomes such as high life and job satisfaction, and good physical and mental health (McNall, Nicklin & Masuda, 2010).

Past research has indicated that balancing work and family is a challenge for working parents. However, there is a paucity of evidence on whether, and in what way, sole working mothers' experiences of WFC and WFE differ from partnered working mothers. In particular, there is a lack of research on the WFE (or similar constructs) even though these processes are important in understanding how working parents combine work and family (Hill, 2005). This is an important consideration because, as described in greater detail below, sole working mothers have become a considerable segment of the working population in developed countries and experience substantial socio-economic disadvantage (Baxter, Gray, Hand, & Hayes, 2012; Ruggeri & Bird, 2014).

The main aim of this thesis is to address an important gap in the literature and investigate the nature of the work-family interface (focusing on WFC and WFE) in sole working mothers relative to partnered working mothers, and examine their implications with respect to mental and physical health. This thesis proposes that sole mothers may have greater difficulty in combining work and family roles because of the absence of a residential partner to share childrearing and household responsibilities, and also because they have access to fewer key resources such as income and social support (Ruggeri & Bird, 2014).

The remainder of this chapter provides an overview of recent trends in sole working

mothers and their health outcomes, available research on the work-family interface, and introduces the Conservation of Resources (COR) Theory (Hobfoll, 1989) as the primary theoretical framework for this thesis. Finally, the aims of the thesis and thesis structure are presented.

1.1 Trends in sole mothers

Throughout this thesis, the term ‘working mothers’ is used to refer to mothers engaged in paid employment with a dependent child. ‘Sole mothers’ refers to mothers who are divorced, separated, widowed, or who have never married and do not have a current residential partner; the term ‘partnered mother’ refers to mothers who are married or in a relationship with a residential partner. Over recent decades there have been considerable changes in family structures in Australia (Hayes, Weston, Qu & Gray, 2010). These changes have included: cohabitation increasing from 6% in 1996 to 16% in 2011, and cohabitation prior to marriage increasing from 16% of couples who had married in 1975 to 78% in 2011 (Hayes et al., 2010); annual marriage rates have fallen in Australia since 1947 when it peaked at about 12%, and is currently at 5.4%; divorce has become less stigmatized due to changing social norms and the legislative reforms associated with the *Family Law Act* 1975 (Hayes et al., 2010). Furthermore, there are increasing proportions of children born outside of marriage or to unpartnered women, rising from 8% in 1970 to about 34% in 2011 (Hayes et al., 2010). Such changes have contributed to the rise of one-parent families. Between 1976 and 2013, the percentage of Australian families with children up to 15 years of age has increased by 7.5% from 6.5% to 14%. For families with dependent children under 18 years of age the current rate of one-parent families is about 20%, thus accounting for almost one in five Australian families (ABS, 2015a). The majority (87%) of these one-parent families are sole mother families, which currently account for approximately 800,000 families in Australia (ABS, 2015a), and are projected to increase to about 1,300,000 families by 2036 (ABS, 2015b). There have been similar trends in other Western countries despite differing cultural attitudes to family care, as well as family and social policies (Craig & Mullan, 2010). In the United States (US), for instance, where child care is considered a private matter and not a wider social issue, much like in Australia (Craig & Mullan, 2010), mother-only families have risen from about 10% in 1968 to approximately 25% in 2016 (USCB, 2016). A similar attitude to child care is evident in the United Kingdom where there has been an increase of 18.6% in sole-parent families, the majority (86%) of which are headed by a lone female parent (ONS, 2016). As a further example, in Denmark – a country where there is greater support for women to combine work and motherhood (Craig & Mullan, 2010) – although the trend has not been as strong, there has been an increase of 8 per cent

in sole-parents, the vast majority (80%) of whom are women (Statistics Denmark, 2016).

Changes in the welfare systems and work-family policies also influence the number of sole mothers in paid employment. In Australia, for instance, welfare reforms over the past decade saw the working requirements of sole parents change such that they can no longer remain on income support once their youngest child is 8 years old, down from 16 years previously. There have arguably been detrimental effects of this welfare reform with evidence that child poverty in sole-parent households increased following this welfare reform. In addition, there has been an increase in the number of sole mothers looking for and engaging in paid employment (Wilkins & Bursian, 2013).

1.2 Working mothers

A number of economic and social factors have contributed to considerable increases in the proportion of mothers in the workforce. Women are increasingly returning to, or remaining in, the workforce following the birth of a child. For instance, in Australia between 1991 and 2011, the proportion of sole mothers in employment increased by 13 percentage points compared to an increase of 10 percentage points in partnered mothers (Baxter & Alexander, 2008). Employment offers numerous benefits to mothers including greater financial security and better health outcomes (Zabkiewicz, 2010). Thus, work has the potential to generate positive outcomes for sole mothers; however, it can also act as a significant stressor that may contribute to greater social and health disadvantages.

There is strong evidence that sole mothers have poorer health and functioning relative to partnered mothers (Burstrom, Whitehead, Clayton, Fritzell, Vannoni & Costa, 2010). For instance, sole mothers report greater levels of depression and psychological distress than partnered mothers (Crosier, Butterworth, & Rodgers, 2007). Sole mothers are also more likely to report chronic stress (Cairney, Boyle, Offord, & Racine, 2003) and substance use disorders compared to partnered mothers (Lipman, MacMillan, & Boyle, 2001).

Little is known, however, about the potential health inequalities experienced by sole mothers who are in paid employment, or whether they have differing experiences of the work-family interface compared with partnered working mothers. For example, the vast majority of previous studies focus on mothers who are married or have a residential partner (Allen et al., 2000). The few studies involving sole working mothers that are available have explored WFC only, and have been limited by methodological issues such as cross-sectional design, and small sample sizes (e.g., Ahmad, Baba & Hassan, 2009; Ahmad & Ngah, 2011). In studies where sole and partnered mothers were included, differences in the work-family interface were not commonly explored, and when they were, findings were mixed. For

example, Dziak, Janzen and Muhajarine (2010) reported higher WFC in sole mothers than partnered mothers, yet Bull and Mittlemark (2009), reported no differences in WFC between sole and partnered mothers. Moreover, WFE (or similar constructs) has rarely been studied in working mothers.

Another limitation of previous work-family research on working mothers is that there are no studies examining how working mothers experience combinations of WFC and WFE. WFC and WFE are distinct constructs and can co-occur, and combinations of WFC and WFE are associated with health and functioning outcomes (Rantanen, Kinnunen, Mauno, & Tillemann, 2011). Correspondingly, scholars have argued for the use of person-centred approaches (i.e., cluster analysis, or latent analysis) in work-family studies as this approach enables the simultaneous investigation of WFC and WFE at a time, and identify distinct subgroups of WFC and WFE combinations (Pulkkinen & Kokko, 2012; Rantanen, et al., 2011). The person-centred approach can provide additional insight into the work-family interface of working mothers, and is therefore an important complement to the variable-based approach more commonly used.

1.3 Theoretical framework

This thesis utilises the Conservation of Resources (COR) theory (Hobfoll, 1989) as a theoretical framework to examine the nature and outcomes of the work-family interface in sole working mothers. COR theory has been widely used in the work-family literature (e.g. Grandey & Cropanzano, 1999). For instance, Grandey and Cropanzano (1999) found support for using COR as a framework in examining predictors of WFC (e.g. work role stress, gender), and behavioural outcomes (including life distress) of WFC. COR theory (Hobfoll, 1989) has also been used to guide research into WFE (e.g., Wayne, Grzywacz, Carlson & Kacmar, 2007), including as a framework for explaining relationships between antecedents and consequences of WFE and health-related outcomes (McNall, Nicklin & Masuda, 2010; Wayne et al., 2007). According to COR theory, resources are defined as “those objects, personal characteristics, conditions or energies that are valued in their own right, or that are valued because they act as conduits to the achievement or protection of valued resources” (Hobfoll, 2001, p.339). Relevant examples of key resources in the present context include good health, income, social support, marriage or partnership and help at home (Hobfoll, 2001).

A key proposition of the COR theory is that a loss of resources, whether threatened or real, or a lack of return following investment of resources, leads to stress and strain (Hobfoll, 1989). Furthermore, COR theory proposes that an individual with low resources is more vulnerable to future resource losses and has less potential for resource gains (Hobfoll,

2001). It is plausible that sole working mothers have access to fewer resources (e.g., money, time, energy and social support) relative to partnered working mothers. Drawing on the COR theory (Hobfoll, 1989), fewer resources could mean that sole working mothers have higher WFC and lower WFE relative to partnered mothers who have higher resource reservoirs; however, findings have been mixed in past literature (e.g., Bull & Mittlemark, 2009; Dziak, Janzen & Muhajarine, 2010). Furthermore, very little is known about whether WFE differs between sole and partnered mothers, and this is an important gap in the work-family literature that requires addressing.

1.4 Resources and the work-family interface

There are many types of resources that could influence potential differences between sole and partnered mothers in the work-family interface. This thesis focuses on three relevant resources for working mothers, social support, work hours, and internal locus of control, or internality (Craig, 2004; Harvey & Mukhopadhyay, 2007; Sherman, Higgs & Williams, 1997). The lower resources of sole mothers compared to partnered mothers potentially influence experiences of WFC and WFE, partly due to greater vulnerability to further loss from low resource levels, and also the greater saliency of resource gains in the context of resource loss, consistent with COR theory (Hobfoll, 2001). Whilst, some research has been carried out on WFC and WFE in working mothers, there is still very little understanding of potential differences between sole and partnered mothers and underlying role of resources. Moreover, the expected poorer health outcomes of sole mothers compared to partnered mothers may also result from lower resources in sole mothers, and increase the risk of worsening health and poorer experiences of the work-family interface.

1.5 The work-family interface, health, and burnout

In addition to examining whether the nature of the work-family interface is different for sole and partnered mothers, this thesis also examines whether the implications of WFC and WFE for health differ between sole and partnered working mothers. In Chapter 3, mental and physical health is assessed broadly using the Short-Form Health Survey (SF-12, Ware & Kosinski, 2001). In Chapters 4 and 6, the focus is on burnout, which is defined as a “combination of physical fatigue, emotional exhaustion, and cognitive weariness” (Shirom, 1989, p. 33), and results from prolonged exposure to stress commonly arising from resource loss (Grandey & Cropanzano, 1999). Burnout is a growing issue for all women (Järvisalo, Andersson, Boedeker, & Houtman, 2005), and may well be particularly concerning for mothers considering the deleterious effects include exhaustion and poor health (Shirom,

2003).

Based on the COR theory (Hobfoll, 1989), and consistent with previous research (e.g., Greenhaus, Allen, & Spector, 2006; Innstrand, Langbelle, Espnes, Falkum & Aasland, 2008), it is hypothesised that WFC will be associated with poorer self-reported health and higher burnout. In contrast, it is hypothesised that WFE will be associated with better self-reported health and lower burnout. However, it is further hypothesised that these associations will differ between sole and partnered working mothers. In particular, drawing on the assumption that some sole working mothers have access to fewer resources than partnered working mothers and the COR theory, it is hypothesised that the associations between WFC and poor health will be stronger in sole partnered working mothers. It is also plausible that sole working mothers may have weaker associations between WFE and positive health outcomes. Furthermore, there are likely to be differences in how sole and partnered mothers experience combinations of WFC and WFE and the implications of these combinations on health outcomes.

1.6 Thesis aims

The overall aim of this thesis is to investigate whether, and how, the work-family interface differs in sole working mothers compared to partnered working mothers, and the implications of these differences for health and burnout. Figure 1.1 outlines the main pathways tested throughout the thesis. The general aims of this thesis are to address the following research questions:

1. Do sole working mothers have poorer health and higher levels of burnout compared with partnered working mothers?
2. Are there differences in the nature of work-family experiences (as reflected by WFC and WFE) between sole and partnered mothers?
3. Do the associations between WFC and WFE and burnout differ between sole and partnered mothers?
4. Do resources such as, social support, work hours, and internality, play a role on WFC and WFE and health outcomes in working mothers, and on identified differences?

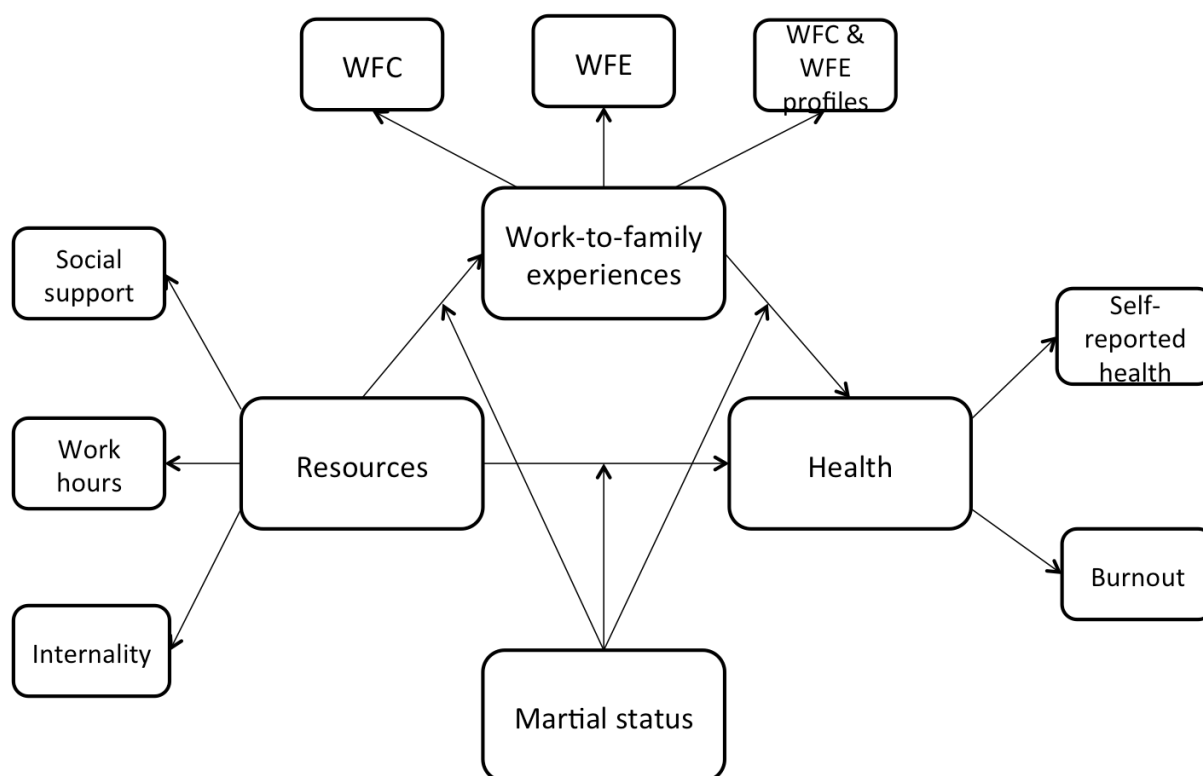


Figure. 1.1. The proposed pathways examined throughout the thesis

1.7 Thesis structure

This thesis is presented as a collection of manuscripts prepared for publication with each chapter representing a manuscript written for a particular journal. The first manuscript (Chapter 2) presents a systematic review of the literature on WFC and WFE in working mothers, proposes the COR theory as the primary theoretical framework for this research, and develops research propositions to guide research investigating the work-family interface in working mothers and, in particular, sole working mothers. The following four manuscripts (Chapters 3, 4, 5 and 6) present empirical findings on studies of working mothers, defined within as mothers engaging in paid employment with a dependent child up to 18 years of age. Chapter 3 is a comparative study examining physical and mental health outcomes (as assessed by the SF-12) of sole and partnered working mothers in paid employment. Chapter 3 also examines whether social support and work hours account for any differences in health outcomes between sole and partnered mothers. Chapter 4 consists of a survey study that investigates differences between sole and partnered mothers in relation to WFC, WFE and burnout. Furthermore, Chapter 4 examines the relationships of WFC and WFE with burnout, and whether these associations vary between sole and partnered working mothers. Chapter 5 focuses on a key resource – locus of control – and investigates its relationships with WFC and WFE, and examines these relationships for differences between

sole and partnered mothers. Chapter 6 adopts a person-centred approach to investigate whether there are distinct profiles of working mothers based on WFC and WFE levels. These profiles are examined for differences between sole and partnered mothers and also for burnout levels. The final chapter, Chapter 7 summarises the main findings of the thesis and discusses the implications of these findings along with the limitations of the thesis. Recommendations for future research and overall thesis conclusions are provided.

1.8 Significance and originality

This thesis aims to extend current knowledge regarding the relationships between burnout and WFC and WFE in sole and partnered mothers. This novel research argues for the unique needs of sole mothers co-ordinating work and solo parenting. Understanding the work-family interface in parents others than those of a dual-parent family is significant because it may offer unique insight into the experiences of the many individuals from different family types who manage work and family. Moreover, it is anticipated that the findings from this thesis could offer a platform for developing strategies to assist sole mothers in combining a career and family. This may be achieved in a number of ways including by improving the clarity on health differences between sole and partnered mothers when in employment; establishing whether and how WFC and WFE can differ between mothers and implications for health outcomes such as burnout, and by developing an understanding on how resources might underlie these processes in line with COR theory (Hobfoll, 1989). Government policy guides decisions relating to work for sole and partnered mothers and reflect both and influence social norms (Craig & Mullan, 2010). In Australia, work-family issues are seen as a private matter for individuals to navigate rather than the wider social issue that they are (Craig & Mullan, 2010; Baird, 2011; The Work + Family Policy Roundtable, 2016). This view of work-family reinforces traditional gender roles in families, thus hindering the division of labour in households, equality in the workplace, and mothers' ability to meet work and family demands. Furthermore, there is evidence that this approach is unsustainable (Craig, 2016). Clearly, broader policy and social contexts are an important consideration when examining the work-family interface of sole mothers; however, a full discussion of policy debates is beyond the scope of this thesis.

The present research proposes to make an original contribution to the literature on the work-family interface in a growing, yet vulnerable population of employees, sole working mothers by demonstrating that there are distinctions in their experiences combining work and family relative to partnered mothers.

1.9 References

- ABS (2015a). *Family Characteristics and Transitions, Australia, 2012-2013* (Catalogue no. 4442.0). Canberra: Australian Bureau of Statistics.
- ABS (2015b). *Household and family projects, Australia, 2011 to 2036* (Catalogue no. 3236.0). Canberra: Australian Bureau of Statistics.
- Ahmad, A., Baba, M., & Hassan, S. A. (2009). Work-family conflict and its antecedents among single mother employees. *The International Journal of Interdisciplinary Social Sciences*, 4(8), 81-92.
- Ahmad, A., & Ngah, N. (2011). Impact of dispositional factors and work-family conflict on job satisfaction among single mothers employees. *American Journal of Applied Sciences*, 8(11), 1107-1115.
- Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, 5(2), 278-308.
- Andreassi, J. K., & Thompson, C. A. (2007). Dispositional and situational sources of control: Relative impact on work-family conflict and positive spillover. *Journal of Managerial Psychology*, 22(8), 722-740.
- Baird, M., & Litwin, A. S. (2005). Rethinking work and family policy: The making and taking of parental leave in Australia. *International Review of Psychiatry*, 17(5), 385-400.
- Baxter, J., & Alexander, M. (2008). Mothers' work-to-family strain in single and couple parent families: The role of job characteristics and supports. *Australian Journal of Social Work*, 43(2), 195-214.
- Baxter, J., Gray, M., Hand, K., & Hayes, A. (2012). Parental joblessness, financial disadvantage and the wellbeing of parents and children. *FaHCSIA Occasional Paper* (48).
- Bull, T., & Mittelmark, M. B. (2009). Work life and mental wellbeing of single and non-single working mothers in Scandinavia. *Scandinavian Journal of Social Medicine*, 37(6), 562-568.
- Burstrom, B., Whitehead, M., Clayton, S., Fritzell, S., Vannoni, F., & Costa, G. (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes—the example of Italy, Sweden and Britain. *Social Science & Medicine*, 70(6), 912-920.
- Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behaviour*, 67(2), 169-198.
- Cairney, J., Boyle, M., Offord, D. R., & Racine, Y. (2003). Stress, social support and depression in single and married mothers. *Social Psychiatry and Psychiatric*

- Epidemiology*, 38(8), 442-449.
- Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work–family interface: Development and validation of a work–family enrichment scale. *Journal of Vocational Behavior*, 68(1), 131-164.
- Craig, L. (2004). *Time to Care: A Comparison of How Couple and Sole Parent Households Allocate Time to Work And Children*. Sydney: Social Policy Research Centre.
- Craig, L. (2016). *Bad Timing: Balancing work and family in the 24/7economy*, So What? Lecture series, UNSW, April 5.
- Craig, L. & Mullan, K. (2010). Parenthood, gender and work-family time in USA, Australia, Italy, France and Denmark, *Journal of Marriage and Family* 72(5), 1344-1361
- Crosier, T., Butterworth, P., & Rodgers, B. (2007). Mental health problems among single and partnered mothers. *Social Psychiatry and Psychiatric Epidemiology*, 42(1), 6-13.
- Dziak, E., Janzen, B. L., & Muhajarine, N. (2010). Inequalities in the psychological well-being of employed, single and partnered mothers: The role of psychosocial work quality and work-family conflict. *International Journal for Equity in Health*, 9(6), 1-8.
- Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior*, 54(2), 350-370.
- Greenhaus, J. H., Allen, T. D., & Spector, P. E. (2006). Health Consequences of Work–Family Conflict: The Dark Side of the Work–Family Interface. In P.L. Perrewé, D C. Ganster (Eds.) *Employee Health, Coping and Methodologies (Research in Occupational Stress and Well-being, Volume 5)*. Emerald Group Publishing Limited, 61–98.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family Roles. *The Academy of Management Review*, 10(1), 76-88.
- Grzywacz, J.G. & Marks, N.F. (2000). Reconceptualising the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111-126.
- Hill, E. J. (2005). Work-family facilitation and conflict, working fathers and mothers, work-family stressors and support. *Journal of Family Issues*, 26(6), 793-819.
- Halbesleben, J. R. B., Harvey, J., & Bolino, M. C. (2009). Too engaged? A conservation of resources view of the relationship between work engagement and work interference with family. *Journal of Applied Psychology*, 94(6), 1452-1465.
- Harvey, A. S., & Mukhopadhyay, A. K. (2007). When twenty-four hours is not enough: Time poverty of working parents. *Social Indicators Research*, 82(1), 57–77.
- Hayes, A., Weston, R., Qu, L. & Gray, M. (2010). *Families Then and Now: 1980-2010* (Facts Sheet). Melbourne, Australian Institute of Family Studies.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualising stress.

- American Psychologist*, 44(3), 513-524.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources Theory. *Applied Psychology: An International Review*, 50(3), 337-421.
- Innstrand, S. T., Langballe, E. M., Espnes, G. A., Falkum, E., & Aasland, O. G. (2008). Positive and negative work–family interaction and burnout: A longitudinal study of reciprocal relations. *Work & Stress*, 22(1), 1-15.
- Ito, J. K., & Brotheridge, C. M. (2003). Resources, coping strategies, and emotional exhaustion: A Conservation of Resources perspective. *Journal of Vocational Behavior*, 63(3), 490-509.
- Järvisalo, J., Andersson, B., Boedeker, W., & Houtman, I. (2005). Mental disorders as a major challenge in prevention of work disability. Experiences in Finland, Germany, the Netherlands and Sweden: Kela.
- Lipman, E. L., MacMillan, H. L., & Boyle, M. H. (2001). Childhood abuse and psychiatric disorders among single and married mothers. *American Journal of Psychiatry*, 158(1), 73-77.
- McManus, K., Korabik, K., Rosin, H. M., & Kelloway, E. K. (2002). Employed mothers and the work-family interface: Does family structure matter? *Human Relations*, 55.
- McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work–family enrichment. *Journal of Business and Psychology*, 25(3), 381-396.
- ONS. (2016). *Families and households in the UK: 2016*. London: Office for National Statistics.
- Pulkkinen, L., & Kokko, K. (2012). Foundational issues in longitudinal data collection. In B. Laursen, T. D. Little & N. A. Card (Eds.), *Handbook of Developmental Research Methods* (pp. 129–147). New York, NY: The Guilford Press.
- Rantanen, J., Kinnunen, U., Mauno, S., & Tillemann, K. (2011). Introducing theoretical approaches to work-life balance and testing a new typology among professionals. In S. Kaiser, M. Ringlstetter, D. R. Eikhof & M. Pina e Cunha (Eds.), *Creating Balance? International Perspectives on the Work-Life Integration of Professionals* (pp. 27–46). Berlin Heidelberg: Springer.
- Ruggeri, K., & Bird, C. E. (2014). *Single Parents and Employment in Europe*. (JUST/2011/GEND/PR/1081/A4). Belgium: RAND Europe.
- Statistics Denmark (2016). *Statistical Yearbook*. Copenhagen: Statistics Denmark.
<http://www.dst.dk/en/Statistik/Publikationer/VisPub?cid=22256>. Accessed 17th January 2017.
- Sherman, A.C., Higgs, G.E. & Williams, R.L. (1997). Gender differences in the locus of

- control construct, *Psychology and Health*, 12(2), 239-248 .
- Shirom, A. (1989). Burnout in Work Organisations. In C. L. Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organisational Psychology* (pp. 25-48). New York: Wiley.
- Shirom, A. (2003). Job-related burnout: A review. In J. Campbell & L. Tetrick, (Eds). (2003). *Handbook of Occupational Health Psychology*, (pp. 245-264). Washington, DC, US: American Psychological Association.
- The Work + Family Policy Roundtable. (2016). Work Cae and Family Policies – Election Benchmarks 2016. Women + Work Research Group: The University of Sydney.
- USCB. (2016). *The Majority of Children Live With Two Parents, Census Bureau Reports*. United States Census Bureau (Release Number: CB16-192). Washington DC: U.S. Department of Commerce.
- Ware, J. E., & Kosinski, M. (2001). *SF-36 Physical and Mental Health Summary Scales: A Manual for Users of Version 1* (Second Edition) Lincoln, RI: Quality Metric Incorporated.
- Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2007). Work–family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review*, 17(1), 63-76.
- Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work–family experience: Relationships of the big five to work–family conflict and facilitation. *Journal of Vocational Behavior*, 64(1), 108-130.
- Wilson, R. & Bursian, O. (2013, June 12). One in four children from single-parent families live in poverty. *The Conversation*. Retrieved from <https://theconversation.com/one-in-four-children-from-single-parent-families-live-in-poverty-15097>.
- Zabkiewicz, D. (2010). The mental health benefits of work: do they apply to poor single mothers? *Social Psychiatry and Psychiatric Epidemiology*, 45(1), 77-87.

CHAPTER 2: SOLE MOTHERS IN THE WORKFORCE: A SYSTEMATIC REVIEW AND AGENDA FOR FUTURE WORK-FAMILY RESEARCH

Robinson, L.D., Magee, C.A., & Caputi P. (Revision submitted). Sole mothers in the workforce: A systematic review and agenda for future work-family research. *Journal of Family and Theory Review*.

2.1 Abstract

There is remarkably little research on the work-family interface of sole mothers. Sole mothers potentially experience greater difficulties in meeting the challenges of combining work and family compared to partnered mothers. This is partly due to the absence of a residential partner who can share childrearing and household obligations, and documented disadvantages of many sole mothers. The current paper provides a case for further research on sole working mothers, in particular for more comparative studies with partnered mothers. In conducting a systematic review of relevant literature, proposing a strong theoretical framework for exploring differences between sole and partnered mothers, and developing research propositions this paper provides a foundation for future research. Implications of further research are also discussed.

Sole mothers in the workforce: A systematic review and agenda for future work-family research

2.2 Introduction

The past few decades have seen considerable growth in non-traditional families (e.g., sole-mother families), and a corresponding rise in paid employment rates for sole mothers (Baxter, 2013; Bull & Mittlemark, 2009). While paid employment offers many important health, economic, and social advantages, there is some evidence that sole working mothers experience greater difficulties combining work and family compared with partnered working mothers or mothers not in paid employment (Chang, Chin & Ye, 2014). This reflects a range of factors including the lack of spousal support, the challenges of parenting alone, and greater socioeconomic hardship (Chang, Chin & Ye, 2014). However, research investigating the nature of the work-family interface, specifically work-family conflict (WFC) and work-family enrichment (WFE) in sole working mothers is scarce (e.g. Casper, Eby, Bordeaux, & Lockwood, 2007; Parasuraman & Greenhaus, 2002). This is an important gap in the literature given that the work-family interface has considerable implications for health and well-being, job-related outcomes, and family functioning (Byron, 2005; McNall, Nicklin & Masuda, 2010). In brief, WFC occurs when the demands of work interfere with the ability to perform family duties (Greenhaus & Beutell, 1985). WFE is defined as the process by which resource gains at work improve performance in the family domain (Carlson, Kacmar, Wayne & Grzywacz, 2006). Understanding the nature of work-family experiences in sole mothers, and the ways they differ from partnered working mothers could help to inform strategies to support sole working mothers and facilitate work and family life.

In the present review sole working mothers are defined as women who are: engaged in paid employment; have a dependent child; and are not married/does not have a residential partner. Partnered working mothers are defined as women who are: engaged in paid employment; have a dependent child; and is married/has a residential partner. The purpose of the present paper is to review available literature that has examined the nature of the work-family interface in sole working mothers. The present paper begins by discussing sole mothers, and then discuss the components of the work-family interface that are the primary focus of this paper: work-family conflict (WFC) and work-family enrichment (WFE). Then systematically reviews relevant literature examining the nature and outcomes of WFC and WFE in sole and partnered working mothers, and the theoretical frameworks used in these studies. Next it is proposed that the Conservation of Resources (COR) theory (Hobfoll, 1989) represents an important theoretical framework for exploring and understanding potential differences between sole and partnered mothers. Drawing on this

work, research propositions to guide future research are provided.

Sole Mothers

It is well established that sole mothers, both in Australia and overseas, are a disadvantaged segment of the population (ABS, 2008; Baxter & Renda, 2011). Sole mothers are often less educated, have lower incomes, have greater trouble with housing affordability, and have less social support than partnered mothers (Burstrom, Whitehead, Clayton, Fritzell, Vannoni & Costa, 2010; Cairney, Boyle, Offord, & Racine, 2003). Sole mothers and their children consequently have a greater risk of living below the poverty line (ACOSS, 2014). In Australia, for instance, almost a quarter of children from sole-parent families live in poverty in contrast to about 7% of children in dual-parent families (Wilkins & Bursian, 2013). The rate is even higher in the U.S. where about 40% of sole-mother families live in poverty, compared to approximately 7% of dual-parent families (Entmacher, Gallagher Robbins, Vogtman, & Morrison, 2014).

Sole mothers also have poorer health outcomes compared to partnered mothers (e.g., Cairney, et al., 2003; Crosier, Butterworth, & Rodgers, 2007; Wang, 2004), with higher rates of psychological distress, anxiety, substance misuse, and major depression (Avison, Ali, & Walters, 2007; Cairney et al., 2003; Crosier et al., 2007; Lara-Cinisomo & Griffin, 2007; Wang, 2004), along with lower self-rated health (Burstrom et al., 2010; Fritzell et al., 2012), quality of life (Cook, Davis, Smyth, & McKenzie, 2009), and life satisfaction (Mauno, Kinnunen, & Rantanen, 2011).

Increasingly, sole mothers are in some form of paid employment (Baxter, 2013; Casey & Maldonado, 2012). In Australia, for example, there has been an increase in employment rates of sole mothers from 44% in 1991 to 57% in 2011, and the rate of increase has been greater for sole than partnered mothers (Baxter, 2013). The rates of employment of sole mothers in the US and Europe are even higher. In 2014, 69.4% of sole mothers in the US (US Bureau, 2015) and 84.1% of sole mothers in Europe were employed (Ruggeri & Bird, 2014). Sole mothers likely have greater difficulties facing the challenges of combining work and family compared with partnered working mothers as they do not have a residential partner to share childrearing and household duties, and are overall a more disadvantaged segment of the population than partnered mothers across many countries (Allen, Herst, Bruck & Sutton, 2000).

Although the difficulties of combining work and family are well established, research shows that participating in these dual roles can also have positive health effects for women, including sole mothers (Fokkema, 2003; Zabkiewicz, 2010). Additionally, there are substantial social and economic benefits to employment (Casey & Maldonado, 2012). However there is evidence to suggest that compared to working partnered mothers, sole

working mothers still have poorer health outcomes (Afifi, Cox, & Enns, 2006; Dziak, Janzen, & Muhaarine, 2010). For example, sole working mothers tend to report lower levels of life satisfaction, happiness, mental health and positive affect than working partnered mothers (Bull, 2008; Bull & Mittlemark, 2009; Cook et al., 2009; Dziak, Janzen & Muhaarine, 2010). Further, working sole mothers are more likely than working partnered mothers to experience financial hardship, less social support, and poorer psychosocial work quality (Cook et al., 2009; Dziak et al., 2010). Sole mothers are also more vulnerable to role strain when compared to partnered mothers (Buehler, O'Brien, Swartout, & Zhou, 2014). In aggregate, available research suggests that compared to partnered mothers, sole mothers face more disadvantages, and have poorer health outcomes. So far, however, there is very little understanding on how or why there are health differences between working mothers and in particular whether WFC and WFE, underlie some of these inequalities.

The Work-Family Interface

There is a growing body of literature reflecting the increasing importance of the work-family interface for individuals, families and organisations (e.g., Mauno, Kinnunen, & Rantanen, 2011; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Opie & Henn, 2013). Research on the work-family interface recognises that work can interfere with family obligations and that work can also enhance performance in the family domain (Carlson, et al., 2006). Although numerous terms have been used to explain different aspects of the work-family interface (e.g., work-family interference, work-family enhancement, negative spillover, and positive spillover), this paper focuses on work-family conflict (WFC) and work-family enrichment (WFE) to be consistent with most contemporary literature (Byron, 2005; McManus, Korabik, Rosin, & Kelloway, 2002). Considerable research has demonstrated that WFC and WFE have important implications for health, well-being and productivity (Greenhaus & Powell, 2006; Magee, Stefanic, Caputi, & Iverson, 2012; McNall, Nicklin, & Masuda, 2010).

Systematic Review of Work-Family Interface Studies In Working Mothers

Most studies investigating WFC and WFE have focused on parents who are part of a traditional nuclear family (e.g. Allen, et al., 2000) and as a result much less is known about the experiences of sole mothers despite the growing diversity of family sizes and types (Hayes, Weston, Qu, & Gray, 2010; OECD, 2011). In addition, differences between sole and partnered mothers are often not explored. In the cases when sole mothers are included they are not consistently identified separately in the analysis, nor has a theoretical framework been used to understand the processes underlying the differences (Baxter & Alexander, 2008, p. 198). In order to address this gap in the literature, available studies on

working mothers are described; provide evidence for differences between sole and partnered working mothers; and identify limitations of current studies.

2.3 Search Methodology

The systematic review includes studies published between 2005 and March 2016 that examined aspects of the work-family interface in working mothers. Studies that included fathers or non-mothers were excluded. The systematic review was conducted using three search engines that have extensive coverage of social sciences research (PsychINFO, Scopus, and Web of Science). The following search terms were used: (“work-family conflict” OR “work-family interference” OR “work-family spillover” OR “work-family enrichment” OR “work-family facilitation” OR “work-family enhancement”) AND (mother* OR mom* OR mum*).

Furthermore, only studies that met the following criteria were considered for inclusion: (i) included quantitative data; (ii) the study was published in English; (iii) the study measured WFC or WFE. The search terms yielded 445 articles, the titles of which were scanned to remove any non-relevant papers, leaving 47 articles. The abstracts of the remaining papers were then scanned to remove 23 further papers, and finally the full text articles were reviewed. This process resulted in a total of 16 journal articles that met the inclusion criteria. Due to the small number of identified studies, the results are synthesized as a narrative review rather than a meta-analysis.

2.4 Results

Study Characteristics.

The characteristics of the 16 included studies are shown in Table 1. These studies were based across a number of countries including the United States (US; 5), Malaysia (3), Canada (2), Australia (2), Israel (1) and South Africa (1). Additionally one study crossed 17 countries as data was obtained via the European Social Survey (Bull & Mittlemark, 2008), and another across Scandinavia, including Denmark, Sweden and Norway (Bull & Mittlemark, 2009). Four studies examined work-family interactions in sole mothers only (Ahmad, Baba, & Hassan, 2009; Ahmad & Ngah, 2011; Bull & Mittlemark, 2008; Ciabattari, 2007). Three of the 15 studies included partnered and/or married mothers only (Braunstein-Bercovitz, Frish-Burstein, & Benjamin, 2012; Mulvaney, McNall & Morrissey, 2011; Noor, 2004). Nine studies included both sole and partnered mothers (Baxter & Alexander, 2008; Bull & Mittlemark, 2009; Carlson, et al., 2011; Dziak et al., 2010; Losoncz & Bortolotto, 2009; Marshall, Tracey, Orthner, & Rose, 2009; McManus et al., 2002; Opie & Henn, 2013). All

but one study measured a form of WFC, two studies also measured WFE (i.e., Losoncz & Bortolotto, 2009; Mulvaney, McNall & Morrissey, 2011), and one study measured WFE only (Zhou & Buehler, 2016). These studies indicate that there is relatively little research on the work-family interface in working mothers.

Antecedents of WFC and WFE

As shown in Table 2.1, antecedents of WFC are broadly in groups of work, non-work, and individual differences and 15 studies identified antecedents relating to WFC. Work-related antecedents, including organizational social support, role overload, work hours, job security and job quality, were most commonly studied (eight studies) (e.g., Ahmad, Baba, & Hassan, 2009, Baxter & Alexander, 2008; Carlson, et al., 2011; Marshall, et al., 2009; McManus, et al., 2002; McNall & Morrissey, 2011). The relationship between work-related stressors has been well established in the literature (see Frone, Russell & Cooper, 1992). Individual differences were included in four studies and included locus of control, perfectionism, person environment congruence, neuroticism and conscientiousness (e.g., Ahmad, Baba, & Hassan, 2009; Ahmad & Ngah, 2011; Braunstein-Bercovitz, Frish-Burstein, & Benjamin, 2012; Opie & Henn, 2013). Four studies examined the following non-work related antecedents of WFC: non-work social support, home environment, and family demands were included (e.g., Bull & Mittlemark, 2009; Ciabattari, 2007; Losoncz & Bertolotto, 2009). Two studies examined antecedents of WFE, and included work-related factors: skill discretion, schedule control, psychological requirements and work hours or schedule, professional status, job rewards, benefits of employment and work commitment (Carlson et al., 2011; Zhou & Buehler, 2016). One study also examined antecedents within the family domain – income-to-needs ratio, child's age, partner intimacy and social support – as well as antecedents within the individual domain – maternal education, child age, maternal health and extroversion (Zhou & Buehler, 2016).

Table 2.1 Studies with samples of working mothers measuring WFC and/or WFE

Sole mothers only							
Study	Sample (n)	Country	Methodology & theory	W-F construct	Antecedent(s)	Consequence(s)	Main Findings
Ahmad, Baba & Hassan (2009)	Sole mothers (<i>n</i> =159)	Malaysia	Cross sectional COR theory	WFC	Locus of control Role conflict Role overload Perfectionism	Job satisfaction	Locus of control (-), perfectionism (+), role conflict (+), role overload (+) and supervisor support (-) contributed significantly to WFC
Ahmad & Ngah (2011)	Malaysian sole mothers (<i>n</i> =159)	Malaysia	Cross sectional COR theory	WFC	Dispositional factors (perfectionism and locus of control)	Job satisfaction	Perfectionism (-) and locus of control (-) related to WFC
Bull & Mittlemark (2009a)	Sole mothers across 17 countries, aged 45 years and younger and with a child 20 or under living at home (<i>n</i> =484)	17 European countries ^b	Cross sectional	WFC	Self-enhancement, Self transcendence values	Self-reported wellbeing (SWB)(life satisfaction, positive affect and happiness)	SWB (-) related to WFC
Ciabattari (2007)	Low income unmarried mothers (<i>n</i> =1676)	US	Cross sectional	WFC	Social capital	NA	Social capital (-) related to WFC
Partnered mothers only							
Braunstein-Bercovitz , Frish-Burstein & Benjamin (2012)	Married mothers with at least one child under the age of 10 (<i>n</i> =146)	Israel	Cross-sectional COR theory	Work-interferes-family (WIF)	Person-environment congruence Personality type	Burnout Life satisfaction	WIF mediates relationship (-) between PE congruence and burnout WIF mediates relationship between personality type and burnout and life satisfaction (-)
Mulvaney, McNall & Morrissey (2011)	Partnered mothers whom had recently given birth (<i>n</i> =769)	US	Longitudinal (three time points) Role accumulation	Work-family gains and strains	NA	Commitment to work	Work-family strains (-) related to commitment Work-family gains positively related to commitment

Partnered mothers only							
Study	Sample (n)	Country	Methodology & theory	W-F construct	Antecedent(s)	Consequence(s)	Main Findings
Noor (2002)	Partnered mothers (n=310)	Malaysia	Cross-sectional	WFC	LOC	Job satisfaction Distress	WFC was related to job satisfaction (-) and distress (+)
Zhou & Buehler (2016)	Partnered mothers (n=1,019)	US	Longitudinal (5 time points) Role expansion theory	WFE	Income-to-needs ratio Partner intimacy Social support Fewer work hours Professional status Job rewards Benefits of employment Work commitment Maternal education Maternal extroversion Maternal health	-	Higher income-to-needs ratio (+), social support (+), job rewards (+), work commitment (+), maternal education (+) and extroversion (+) related to WFE The positive relationship between WFE and income-to-needs ratio and to benefits of employment were stronger when children were in infancy or toddlerhood rather than middle childhood.
Partnered and sole mothers							
Study	Sample (n)	Country	Methodology & theory	W-F construct	Antecedent(s)	Consequence(s)	Main Findings
Baxter & Alexander (2008)	Mothers of young children, that is with at least one child aged 5 or under (sole n=289, partnered n=3561)	Australia	Cross sectional	Work-to-family strain	Job characteristics Supports	NA	Slightly greater WF strain in sole mothers, however there is a greater likelihood of employment with a residential partner
Bull & Mittlemark, (2009)	Mothers, aged 45 years or younger (sole n=73, partnered n=432)	Denmark Sweden, Norway	Cross sectional	WFC	Financial stress Job characteristics Social support	Life satisfaction Happiness Positive affect	Sole mothers had lower life satisfaction, happiness and higher financial stress. WFC not significantly different between groups of mothers

Partnered and sole mothers							
Study	Sample (n)	Country	Methodology & theory	W-F construct	Antecedent(s)	Consequence(s)	Main Findings
Carlson, Grzywacz, Ferguson, et al. (2011)	Full-time working mothers returning to work 4-months after childbirth (non-married ^a <i>n</i> =38, married <i>n</i> =141)	US	Longitudinal (4, 8 and 12 months postpartum) Job Demands-Resources model	WFC WFE	Job security Skill discretion Schedule control Psychological requirements Nonstandard work schedule	Physical and mental health	Nonstandard work (+) related to WFC. Schedule control buffered the effect of psychological requirements on WFC Skill discretion (+) and Job security (+) related to WFE Physical and mental health (-) related to WFE WFE (+) related to physical health
Dziak, Janzen & Muhajarine (2010)	Mothers with a child under the age of 20 (sole <i>n</i> =236, partnered <i>n</i> =438)	Canada	Cross sectional	WFC	Psychological work quality Financial hardship	Psychological distress	Sole mothers reported greater psychological distress, financial hardship, WFC and poorer psychosocial work quality The greater psychological distress in sole mothers was explained by lower income, psychosocial work quality and WFC
Losoncz & Bortolotto (2009)	Mothers in paid employment with parenting responsibilities for a child 17 years and under (sole <i>n</i> =230, partnered <i>n</i> =1008)	Australia	Cross sectional Cluster analysis Preference theory	Work-life balance, Work-life conflict	Socio-demographics (marital status, income and education) Work environment Home environment	Self-reported health Parenting attitude Big-Five Personality traits	Six clusters identified and the <i>Indifferent yet successful</i> cluster differed by marital status with 84% married compared to 71% in the sample.
Marshall, Tracey, Orthner & Rose (2009)	Working mothers with infants (<i>n</i> =756, a breakdown of sole and partnered was not provided)	US	Three time points: 1, 6, & 15 months postpartum Ecological system theory	WFC	Work hours Job quality	Depressive symptomatology	At 6-months sole mothers reported higher depressive symptomatology. Marital status was not related to WFC; Work hours (+) and job quality (-) related to WFC

Partnered and sole mothers							
Study	Sample (n)	Country	Methodology & theory	W-F construct	Antecedent(s)	Consequence(s)	Main Findings
McManus, Korabik, Rosin & Kelloway (2002)	Study 1 were lower level occupations: sole ($n=89$) and partnered ($n=579$); Study 2 were higher level occupations: sole ($n=36$) and partnered ($n=36$)	Canada	Two cross sectional studies	Work-family interference	Organisational and supervisor support Use of formal policies Family demands Income	Family and job satisfaction	For lower incomes, associations between support and formal policies and WIF and satisfaction. For higher level incomes (-), family demands (+), incomes (-) and marital status (married +) were associated with satisfaction
Opie & Henn (2013)	Mothers (sole $n=75$, partnered $n=192$)	South Africa	Cross sectional Jobs Demand-Resources model	WFC	Neuroticism Conscientiousness	Work engagement	For those with high conscientiousness, work engagement decreases significantly more with an increase in WFC than for those with low conscientiousness

Nb. In cases where there is not theoretical framework listed, the study did not include a framework. The symbol '-' stands for negative and '+' stands for positive. *COR – Conservation of Resources theory; WFC – work-family conflict; ^a further breakdown of marital status not provided.

Relationships between WFC and outcomes

Eleven of the 16 studies examined relationships between WFC and outcomes. Most commonly the relationships between WFC and health outcomes, such as physical and mental health, burnout and psychological distress was studied, with seven studies included (e.g., Braunstein-Bercovitz, Frish-Burstein, & Benjamin, 2012; Carlson, et al., 2011; Dziak et al., 2010). Work-related outcomes were reported by six studies, and included job satisfaction, work commitment, and work engagement (Ahmad & Ngah, 2011; McManus, et al., 2002; Mulvaney, McNall & Morrissey, 2011; Noor, 2004; Opie & Henn, 2013). Finally, non-work or family-related outcomes were reported by one study, with Bull and Mittlemark (2009) reported an inverse relationship between life satisfaction and happiness with WFC.

Relationships between WFE and outcomes

Only two studies examined relationships between WFE and outcomes in working mother (Mulvaney, McNall & Morrissey, 2011; Carlson, et al., 2011). One study looked at the relationship between WFE and work commitment (Mulvaney, McNall & Morrissey, 2011), and the other between WFE and both mental and physical health. There were no studies examining relationships between WFE and non-work, or family, related outcomes.

Comparisons between sole and partnered mothers

A number of important findings were found when reviewing studies comparing sole and partnered mothers. A few studies reported differences in sole and partnered mothers in associations between antecedents and WFC. For instance, social capital (Ciabattari, 2007), and work demands (Ahmad, et al., 2009), influenced WFC in sole mothers to a greater degree than partnered mothers, which in turn impacted on their wellbeing (Bull & Mittelmark, 2008). Differences in relationships between individual characteristics and WFC between sole and partnered mothers were also evidence. For instance, sole mothers' individual characteristics, such as perfectionism (Ahmad et al., 2009; Ahmad & Ngah, 2011) and locus of control (Ahmad & Ngah, 2011), influenced WFC, whereas this was not the case for partnered mothers. Furthermore, in regards to health, comparative studies consistently showed that sole mothers have poorer well-being, greater psychological distress and symptomatology, and lower life satisfaction and happiness than partnered mothers (Bull & Mittelmark, 2008; Dziak et al., 2010; Marshall & Barnett, 1993).

With respect to comparative studies on WFC, findings were mixed. Bull and Mittelmark (2009) reported no differences in total WFC between mothers, however, there was a difference in response to one item. Partnered mothers reported worrying more about work problems when not at work compared to sole mothers. In contrast two studies found no significant differences in WFC between sole and partnered mothers (Marshall et al.,

2009; McManus et al., 2002). Additionally, Baxter and Alexander (2008) reported that after controlling for job characteristics, support and demographic variables, there were no significant differences in work-family strain between sole and partnered mothers. For instance, in Dziak et al. (2010) noted that sole mothers reported higher time- and strain-based WFC levels than partnered mothers, and WFC accounted for the significant association between sole motherhood and greater psychological distress. Another study (Losoncz & Bortolotto, 2009) used cluster analysis to identify distinct groups of work-family balance and found that clusters differed between sole and partnered mothers, with partnered mothers significantly more likely than sole mothers to be part of a cluster termed 'Indifferent yet successful'. Mothers in this cluster reported placing a lower value on their role as a working mother compared to mothers in other clusters, and also thought that working was not good for their parenting (Losoncz & Bortolotto, 2009). Despite the mixed findings on WFC levels between sole and partnered mothers, there is some evidence that work-family conflict and health-related WFC outcomes can differ between mothers. In contrast, there is much less information about differences in work-family enrichment between sole and partnered mothers.

2.4 Limitations of previous studies

Despite the importance of the work-family interface on the functioning and wellbeing of mothers, much uncertainty still exists about differences in the work-family interface between sole and partnered mothers. The most obvious gap in the reviewed literature is the lack of attention given to WFE. There is also a dearth of research on why WFC differences may exist between sole and partnered mothers beyond the absence of a residential partner. Examining the moderating role of marital status on relationships between antecedents and WFC would provide greater insights into reasons for differences between sole and partnered mothers. Similarly, even though a limited number of health and wellbeing outcomes have been studied, it remains unclear whether the associations between the work-family interface and health outcomes differ between sole and partnered mothers, and the moderating effect of marital status on these relationships would be insightful. The following section discusses some of the main limitations in more detail.

Methodological limitations of past studies

There are a number of methodological limitations in past studies that warrant attention. First, the majority of studies used measures of WFC that may lack validity (e.g., Losoncz & Bortolotto, 2009; Noor, 2002), with only four of the reviewed studies using well-established measures (Dziak, et al., 2010; Opie & Henn, 2013). One of the three WFE

studies also used a scale that has not been widely used, or the validity extensively tested, and thus may not be an accurate measure of WFE (Carlson et al., 2011). Measurement issues may contribute to inconsistent findings across studies (Allen et al., 2000; Kossek & Ozeki, 1998). There have been calls for researchers to strive for “greater consistency and construct development of measures” in work-family studies (Kossek & Ozeki, 1998, p.146-147). The use of psychometrically validated measures of WFC and WFE then is important in developing our understanding of any differences between sole and partnered mothers in the work-family interface. Second, some of the comparative studies had very small sample sizes, which can reduce the statistical power of the study (Button, et al., 2013). For instance, McManus et al. (2009) made comparisons between a total of 178 mothers (89 sole and 89 partnered) in one of their studies, and between 72 mothers (36 sole and 36 partnered) their other study. For studies only including sole mothers, the smallest size was 159 mothers for two of the studies (Ahmad et al., 2009; Ahmad & Ngah, 2011). Small sample sizes may lead to unreliable estimates (Button, Ioannidis, Mokrzysh et al., 2013), and thus conclusions from such studies need to be treated with caution (Shen, Kiger, Davies, et al., 2011). Third, all but two studies were cross-sectional with only Mulvaney et al. (2011) and McManus et al. (2002) adopting longitudinal designs utilising data from multiple time points. The lack of longitudinal studies has been a long-held criticism of work-family research. Cross-sectional studies are unable to capture the temporal relationships that exist between variables of the dataset (Demerouti, Bakker & Butlers, 2004). Thus, the processes underlying WFC and WFE, and the health outcomes they predict have not been fully examined (Greenhaus, 2008), and this is particularly the case for studies examining the work-family interface in sole mothers. Furthermore, causal relationships and bi-directionality are not able to be established using cross-sectional research methods (Taris & Kompier, 2003), and these are critical to developing a comprehensive understanding of the work-family interface. Finally, few studies used a theoretical framework to explore the work-family interface in working mothers. A theoretical framework is important because it provides insight into the underlying mechanisms between work and family and what occurs when the work role conflicts with, or enriches, the family role; this framework provides a clear and comprehensive picture of the work-family interface, its antecedents as well as consequences (ten Brummelhuis & Bakker, 2012). The use of a sound theoretical framework allows for hypotheses to be formulated and tested, minimising possible bias that may arise from assuming the causal directions of the work-to-family relationship (ten Brummelhuis & Bakker, 2012).

Theoretical limitations of past studies

The reviewed research incorporates, to varying degrees, several theoretical

frameworks including the Job Demands-Resource model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001), Role Accumulation (Sieber, 1974), and the Conservation of Resource theory (COR) theory (Hobfoll, 1989). However, none of the studies used one of these frameworks to explore differences between sole and partnered mothers, rather they were used to understand associations between WFC and health outcomes (e.g., Marshall, et al., 2009). A theoretical framework can explain, understand and guide predictions on potential differences in the work-to-family interface and associated outcomes between sole and partnered mothers. Therefore, it is important to identify a strong theoretical framework for future research.

The COR theory (Hobfoll, 1989) has been used extensively as a framework to understand and investigate antecedents and consequences of the work-family interface (e.g., Grandey & Cropezano, 1999). This resource-based theory, included in two of the reviewed studies (Carlson et al., 2006; Opie & Henn, 2013), provides a clear framework for identifying types of resources that may underlie the processes of WFE and WFC and their consequences (Hobfoll, 1989; Grandey & Cropezano, 1999). Grandey and Cropanzano (1999) argue that COR offers a strong theoretical framework for understanding the work-family interface for several reasons, including that COR guides hypotheses on associations between work and family roles and outcomes. As discussed below, it is proposed that this resource-based theory is well suited to providing a framework for understanding the potential differences in WFC and WFE experiences between sole and partnered mothers.

2.5 Conservation of Resources Theory

According to the COR theory (Hobfoll, 1989), individuals seek to retain, gain, or avoid losing, resources. Resources are objects, conditions, personal characteristics, and energies that are “valued in their own right, or that are valued because they act as conduits to the achievement or protection of valued resources” (Hobfoll, 2001, p. 340). The COR theory proposes that psychological stress occurs following any of these three instances: resource loss, a threat of resource loss, or a lack of return following resource investment (Hobfoll, 1989). According to Grandey and Cropanzano (1999) resources most relevant to the work-family interface include conditions, such as marital status and personal health; personal characteristics, such as self-efficacy; and energies, for example time, skills and money.

The COR theory encompasses both resource loss and resource gains. The first principle of the COR theory states that resource loss has greater saliency than resource gains (Hobfoll, 1989). That is, losses have a substantially greater impact on an individual than gains, even if equal levels of resource losses and resource gains are experienced (Hobfoll, 1989). The findings of a study examining resource losses and gains among

pregnant inner city women support this principle (Hobfoll, Johnson, Ennis, & Jackson, 2003). Hobfoll et al., (2003) found that that losing resources such as social support had a greater impact on depressive mood and anger than did resource gains and improved economic circumstances.

The second principle of COR theory states that resources must be invested in order to gain or protect resources, or to recover from loss (Hobfoll, 2001). A number of corollaries follow on from this principle. One corollary states that vulnerability to resource loss is dependent on the individual resource reservoirs (Hobfoll, 2001). That is, individuals with low resource levels will be more vulnerable to loss compared to individuals with high resource levels (Hobfoll, 1989). Another corollary of the theory states that those with high resource reservoirs have more potential for gains, and less susceptibility to losses, than individuals with low resource reservoirs (Hobfoll, 2001). That is, gaining resources, like job security or a promotion, places an individual at a greater advantage for gaining further resources. By contrast, those who lack resources and have experienced resource depletion are more vulnerable to resource losses, as initial loss begets further resource loss. This is because resources are used to offset loss, which further depletes resources, and means individuals who have experienced loss are at a disadvantage. For instance, an individual who has little time, money, or energy will invest what resources they have to meet demands and consequently lose resources. Overall, individuals with resources are then in an advantageous position compared to those with fewer resources. One shortfall of COR theory (Hobfoll, 2001) considers resources as individualised and accordingly does not take into account the social and cultural systems that mothers are part of. Social policy influences decisions on working and are an important consideration, however this is an issue that is beyond the scope of the present study.

Resources and the work-family interface in working mothers

According to COR (Hobfoll, 2001), if sole mothers have access to fewer resources than partnered mothers it reduces their resource gains (lower WFE) and increased the likelihood of resource loss (higher WFC). There are a number of areas in which differences between sole and partnered mothers in resources are apparent. First, sole mothers tend to have lower levels of education compared to partnered mothers (ABS, 2007). Highly educated individuals report less WFC as they are often employed in positions allowing for job autonomy and control (Byron, 2005; Michel, Kotrba, Mitchelson, et al., 2011). Further there are often more opportunities for advancement and professional development in these roles. Household incomes also are higher in partnered families than sole-mother families (ABS, 2007), partly due to the higher education and therefore earning potential and also due to the pooling of financial resources in a dual-parent household. Greater household income

allows for outsourcing of household tasks, more choice and flexibility in child care arrangements. Sole mothers are also more likely to experience greater housing instability, and poorer health (Cairney et al., 2003) and less support both within the home from a spouse, who can provide intimacy and help with children and household tasks (Hobfoll, 2001) and also social support outside of the home. For instance, sole mothers report less social support levels than partnered mothers, which can translate into greater difficulties in combining work and family and less likelihood of WFE (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Siu et al., 2010). The degree of support provided by a resident partner can vary greatly, as can the level of support and sharing of duties with non-residential fathers. By and large, the absence of a residential partner increases the difficulty in combining parenting and employment (Baxter, 2013). The disadvantages that sole mothers face can translate into having fewer resources to draw on when combining work and family. For instance, sole mothers report less social support levels than partnered mothers, which can translate into greater difficulties in combining work and family and less likelihood of WFE (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Siu et al., 2010). However, another key resource is education, and sole mothers in general have lower education levels than partnered mothers, and tend to be employed in lower status occupations (Baxter & Renda, 2011).

When considering resource inequalities between sole and partnered mothers, it is important to note the role of socio-economic status (SES) on resource levels within sole mothers. For instance, Ciabattari (2007) reported an inverse relationship between social capital and WFC in low-income sole mothers. Low-income sole mothers also face greater challenges securing stable child-care arrangements, often using multiple sources of childcare, and with a greater likelihood of missing work due to illness (Bianchi & Milkie, 2010). These factors could also greatly increase the vulnerability associated with combining work and family for sole mothers with a lower SES. Despite these differences within sole mothers, partnered mothers are inclined to have greater resources than sole mothers, and these inequalities may underlie potential WFC and/or WFE differences between mothers.

Conservation of Resources Theory and Work-Family Interface in Sole and Partnered Mothers

In applying the COR theory to WFC, Grandey and Cropezano (1999, p.352) state that “interrole conflict leads to stress because resources are lost in the process of juggling both work and family roles”. Experiencing WFC often leads to further losses and difficulties in gaining resources because during times of conflict any available resources are drawn on

which further depletes remaining resources. For instance, a mother experiencing conflict between work and family may start to feel as though she is unable to perform either role well, and may invest more resources into work for fear of losing her job, and into the parenting as she feels she is not meeting the needs of their children. Consequently, resources are invested further into one or both roles, and this leads to loss spirals, which develop due to insufficient resources to offset losses (Hobfoll, 2001). Lower resources as well as resource losses increase vulnerability to WFC. Partnered mothers tend to have greater access to resources than sole mothers, and this may underlie potential WFC differences between mothers. The lower resource levels of sole mothers compared to partnered mothers means they are more vulnerable to losses, which increases their likelihood of experiencing WFC. Accordingly, the first proposition is:

Proposition 1. Compared to partnered mothers, sole working mothers have higher work-family conflict because of their lower resource levels.

Not only are sole mothers more likely to experience higher WFC than partnered mothers, but also the inverse relationship between WFC and poor health outcomes is expected to be stronger in sole than partnered mothers. The low resources of sole mothers is amplified when experiencing WFC as, in line with COR theory (Hobfoll, 1989), they will utilise available resources in order to cope with the conflict between work and family, or to offset further losses (Grandey & Cropezano, 1999). Accordingly, there is further resource depletion accompanied by an increased risk of experiencing the poor health outcomes associated with WFC.

Proposition 2. The inverse associations between work-family conflict and health outcomes will differ between sole and partnered working mothers, such that the associations will be stronger in sole than partnered working mothers.

According to COR, low resources reduce the potential for resource gains (Hobfoll, 2001). As resource gains are key to the enrichment process (Carlson et al., 2006), individuals with low resources will be less likely to gain resources and thus will experience lower WFE. Correspondingly, the second proposition is:

Proposition 3. Sole mothers have lower WFE levels compared to partnered mothers because of their lower resource levels of sole compared with partnered mothers.

According to COR theory there is a complex relationship between resource gains and losses. A further proposition of COR theory is that resource gains become more meaningful in the context of resource losses (Wells, Hobfoll, & Lavin, 1999), and this may underlie potential WFE differences between sole and partnered mothers. That is, if two

individuals experience the same gain, and one has endured a resource loss, then the gain will hold greater importance for the individual who has suffered the loss. Resource loss is common for most sole mothers, as resources tend to be lost following a relationship breakdown, divorce or death of a spouse, and include reduced social support, household incomes, and poorer health (Cairney, et al., 2003; Hobfoll, 1989). Thus somewhat paradoxically, although sole mothers have less potential for gains, when they do experience gains the effects are greater than partnered mothers. For instance, a promotion at work is an important gain, yet for a sole mother following divorce when there is a greater need for financial independence, the promotion and accompanying pay rise will have greater salience for the sole mother compared to the partnered mother. Accordingly, the final proposition is as follows:

Proposition 4. The saliency of resources will differ between sole and partnered mothers, and the associations between resources and WFE will be stronger in sole than partnered working mothers.

WFC and WFE as simultaneous processes

Thus far relationships between health outcomes and WFC and WFE separately have been discussed. However, it is important to note that while WFC and WFE are separate processes that are not mutually exclusive, but rather can co-occur. This means that an individual can have unique combinations of WFC and WFE (e.g. low WFC and high WFE or high WFC and high WFE). That is, for instance, work could limit time for family life (high WFC) whilst also providing resources such as skills and positive affect, which aid with functioning in the home (high WFE). Past research using a person-centred approach to identify distinct combinations of WFC and WFE supports the co-existence of these constructs and shows that there are various combinations of WFC and WFE (e.g., Demerouti & Geurts, 2004; Rantanen, Kinnunen, Mauno, & Tement, 2013). A person-centred approach identifies sub-groups of individuals with similar levels on the given variables but different from those in other groups (Marsh, et al., 2009). Commonly identified sub-groups of profiles include high WFC/low WFE, low WFC/low WFE, low WFC/high WFE and high WFC/high WFE (e.g., Rantanen et al., 2013). Identifying and examining simultaneous experiences of WFC and WFE is important for a number of reasons including, as explained earlier, the well-established associations between both WFC and WFE and health outcomes. For instance, Rantanen et al. (2013) found that psychological strain differed between profiles, with lower levels of psychological strain reported in the low WFC/high WFE profiles, and higher levels of psychological strain reported in the high WFC/low WFE profiles. Other studies have reported differing levels of job and life satisfaction and job exhaustion across various work-family profiles (e.g. Demerouti & Geurts,

2004). Although there is some evidence that work-family profiles can differ by gender and parental status (e.g. Demerouti & Geurts, 2004; Rantanen, et al., 2013), the nature of work-family profiles in working mothers, and potential differences between sole and partnered mothers remains unclear. Additionally, the mechanisms by which these combinations underlie differences in health outcomes between sole and partnered mothers have not been established. Based on the earlier propositions on differences in WFC and WFE levels between sole and partnered mothers, the following is proposed:

Proposition 5. In identifying work-family profiles in working mothers, the combinations of low WFE and high WFC will be more likely in sole than partnered mothers and similarly combinations of high WFE and low WFC will be more likely in partnered than sole mothers.

Proposition 6. The work-family profiles at risk of poor health are those with high WFC and low WFE.

2.7 Conclusion

This paper argues for a deeper understanding of the work-family interface in sole working mothers. The disadvantages facing sole mothers, and the increasing numbers of sole mothers combining work and family roles, provide a compelling case for the necessity to study this group of workers. Sixteen studies on working mothers were identified. These studies show a lack of research on WFE in working mothers and a need for studies using a longitudinal design. Additionally, it is clear that a theoretical framework is necessary in order to explain, understand and predict differences between sole and mothers in the work-family interface and with associated outcomes. It is proposed that the Conservation of Resources (COR) (Hobfoll, 1989) theory provides a strong theoretical framework for exploring and understanding these. Based on the COR theory research propositions are developed to guide future research in this area. Research that tests these propositions can inform the development of practice and policies facilitating sole working mothers. Bull and Mittlemark (2009) points out that although being a sole mother may not be considered a satisfactory situation cognitively, on a daily basis it does provide rewarding and good experiences. It would then be fruitful for the positive side of the work-family interface to be more thoroughly explored and understood in order to facilitate sole mothers in combining both roles.

2.8 References

ABS. (2006). Community participation of people with a disability. *Australian Social Trends*,

- cat no. 4102.0. Canberra: Australian Bureau of Statistics.
- ABS. (2007). *One-Parent Families*. (4102.0). Canberra: Australian Bureau of Statistics.
- ABS. (2008). *Mother's Day Facts and Figures*. Canberra: Australian Bureau of Statistics.
- ACOSS. (2014). *The Poverty Report 2014*. Australian Council of Social Service.
http://www.acoss.org.au/images/uploads/ACOSS_Poverty_in_Australia_2014.pdf
 Retrieved 12th May 2016.
- Afifi, T. O., Cox, B. J., & Enns, M. W. (2006). Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, 41(2), 122-129.
- Ahmad, A., Baba, M., & Hassan, S. A. (2009). Work-family conflict and its antecedents among single mother employees. *The International Journal of Interdisciplinary Social Sciences*, 4(8), 81-92.
- Ahmad, A., & Ngah, N. (2011). Impact of dispositional factors and work-family conflict on job satisfaction among single mothers employees. *American Journal of Applied Sciences*, 8(11), 1107-1115.
- Allen, T., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: a review and agenda for future research. *Journal of Occupational Health Psychology*, 5(2), 278-308.
- Avison, W. R., Ali, J., & Walters, D. (2007). Family structure, stress, and psychological distress: A demonstration of the impact of differential exposure. *Journal of Health and Social Behaviour*, 48(3), 301-317.
- Baxter, J. (2013). *Parents Working Out Work*. Melbourne: Australian Institute of Family Studies.
- Baxter, J., & Alexander, M. (2008). Mothers' work-to-family strain in single and couple parent families: the role of job characteristics and supports. *Australian Journal of Social Work*, 43(2), 195-214.
- Baxter, J., & Renda, J. (2011). Lone and couple mothers in the Australian labour market: Differences in employment transitions. *Australian Journal of Labour Economics*, 14(2), 102-122.
- Braunstein-Bercovitz, H., Frish-Burstein, S., & Benjamin, B. A. (2012). The role of personal resources in work-family conflict: Implications for young mothers' well-being. *Journal of Vocational Behavior*, 80(2), 317-325.
- Buehler, C., O'Brien, M., Swartout, K. M., & Zhou, N. (2014). Maternal employment and parenting through middle childhood: Contextualizing factors. *Journal of Marriage and Family*, 76(5), 1025-1046.
- Bull, T., & Mittelmark, M. B. (2008). Subjective well-being among employed lone mothers in europe: the effects of level of work/family conflict and self-enhancement versus self-

- transcendence value orientation. *International Journal of Mental Health Promotion*, 10(3), 26-33.
- Bull, T., & Mittelmark, M. B. (2009). Work life and mental wellbeing of single and non-single working mothers in Scandinavia. *Scand J Public Health*, 37(6), 562-568.
- Burstrom, B., Whitehead, M., Clayton, S., Fritzell, S., Vannoni, F., & Costa, G. (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes – The example of Italy, Sweden and Britain. *Social Science & Medicine*, 70(6), 912-920.
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14(5), 365-376.
- Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behaviour*, 67(2), 169-198.
- Cairney, J., Boyle, M., Offord, D. R., & Racine, Y. (2003). Stress, social support and depression in single and married mothers. *Social Psychiatry and Psychiatric Epidemiology*, 38(8), 442-449.
- Carlson, D. S., Grzywacz, J. G., Ferguson, M., Hunter, E. M., Clinch, C. R., & Arcury, T. A. (2011). Health and turnover of working mothers after childbirth via the work–family interface: An analysis across time. *Journal of Applied Psychology*, 96(5), 1045.
- Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behaviour*, 68(1), 131-164.
- Casey, T., & Maldonado, L. (2012). Worst Off - Single-Parent Families in the United States: A Cross-National Comparison of Single Parenthood in the U.S. and Sixteen Other High-Income Countries. New York: Legal Momentum.
- Casper, W. J., Eby, L. T., Bordeaux, C., & Lockwood, A. (2007). A review of research methods in IO/OB work-family research. *Journal of Applied Psychology*, 92(1), 28-43.
- Chang, E., Chin, H., & Ye, J. (2014). Organizational work-family culture and working Mothers' Affective Commitment: How career expectations matter. *Human Resource Management*, 53(5), 683-700.
- Ciabattari, T. (2007). Single mothers, social capital, and work-family conflict. *Journal of Family Issues*, 28(1), 34-60.
- Cook, K., Davis, E., Smyth, P., & McKenzie, H. (2009). The quality of life of single mothers making the transition from welfare to work. *Women & Health*, 49(6-7), 475-490.
- Crosier, T., Butterworth, P., & Rodgers, B. (2007). Mental health problems among single and partnered mothers: The role of financial hardship and social support. *Soc Psychiatr Epidemiol*, 42(1), 6-13.

- Demerouti, E., Bakker, A.B. & Butlers, A.J. (2004). The loss spiral of work pressure, work-home interference and exhaustion: reciprocal relations in a three-wave study. *Journal of Vocational Behaviour*, 64,131-49.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499.
- Demerouti, E., & Geurts, S. (2004). Towards a typology of work-home interaction. *Community, Work and Family*, 17(3), 285-309.
- Dziak, E., Janzen, B. L., & Muhaarine, N. (2010). Inequalities in the psychological well-being of employed single and partnered mothers: the role of psychosocial work quality and work-family conflict. *International Journal of Equity in Health*, 9(6), 1-8.
- Entmacher, J. Gallagher Robbins, K. Vogtman, J. & Morrison, A. (2014). *Insecure & Unequal. Poverty and Income Among Women and Families, 2000-2013*. National Women's Law Center. https://nwlc.org/wp-content/uploads/2015/08/final_2014_nwlc_poverty_report.pdf. Retrieved 12th June 2016.
- Fokkema, T. (2003). Combining a job and children: contrasting the health of married and divorced women in the Netherlands? *Social Science and Medicine*, 54(5), 741-752.
- Fritzell, S., Vannoni, F., Whitehead, M., Burstrom, B., Costa, G., Clayton, S., & Fritzell, S. (2012). Does non-employment contribute to the health disadvantage among lone mothers in Britain, Italy and Sweden? Synergy effects and the meaning of family policy. *Health & Place*, 18, 199-208.
- Grandey, A., & Cropanzano, R. (1999). The Conservation of Resources Model applied to work-family conflict and strain. *Journal of Vocational Behaviour*, 54, 350-370.
- Greenhaus, J.H. & Beutell, N.J. (1985). Sources of conflict between work and family roles 10(1), 76-88.
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 72-92.
- Hayes, A., Weston, R., Qu, L., & Gray, M. (2010). *Families Then and Now: 1980-2010*. Australian Institute of Family Studies: Melbourne.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualising stress. *American Psychologist*, 44, 513-524.
- Hobfoll, S. E. (2001). The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory. *Applied Psychology*, 50(3), 337-421.
- Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*, 84(3), 632.

- Kossek, E. E., & Ozeki, C. (1998). Work–family conflict, policies, and the job–life satisfaction relationship: A review and directions for organizational behavior–human resources research. *Journal of Applied Psychology*, 83, 139–149.
- Lara-Cinisomo, S., & Griffin, B. A. (2007). Factors associated with major depression among mothers in Los Angeles. *Women's Health Issues*, 17, 316–324.
- Losoncz, I., & Bortolotto, N. (2009). Work-life balance: The experiences of Australian working mothers. *Journal of Family Studies*, 15, 122–138.
- Magee, C. A., Stefanic, N., Caputi, P., & Iverson, D. C. (2012). The association between job demand/control and health in employed parents: The mediating role of work-to-family interference and enhancement. *Journal of Occupational Health Psychology*, 17(2), 196–205.
- Marshall, N. L., & Barnett, R. C. (1993). Work-family strains and gains among two-earner couples. *Journal of Community Psychology*, 21(1), 64–78.
- Marshall, N. L., Tracey, A. J., Orthner, D. K., & Rose, R. (2009). After the baby: work-family conflict and working mothers' psychological health. *Family Relations*, 58(4), 380–391.
- Mauno, S., Kinnunen, U., & Rantanen, M. (2011). Work-family conflict and enrichment and perceived health: Does type of family matter? *Family Science*, 2(1), 1–12.
- McManus, K., Korabik, K., Rosin, H. M., & Kelloway, E. K. (2002). Employed mothers and the work-family interface: Does family structure matter? *Human Relations*, 55, 1295–1324.
- McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work-family enrichment. *Journal of Business Psychology*, 25, 381–396.
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior*, 32(5), 689–725.
- Noor, N. M. (2004). Work-family conflict, work- and family-role salience, and women's well-being. *The Journal of Social Psychology*, 144(4), 389–406.
- OECD. (2011). *Families are Changing Doing Better for Families*. Paris: Organisation for Economic Co-operation and Development.
- Opie, T. J., & Henn, C. M. (2013). Work-family conflict and work engagement among mothers: Conscientiousness and neuroticism as moderators. *SA Journal of Industrial Psychology*, 39(1).
- Parasuraman, S., & Greenhaus, J. H. (2002). Toward reducing some critical gaps in work-family research. *Human Resource Management Review*, 12(3), 299–313.
- Rantanen, J., Kinnunen, U., Mauno, S., & Tement, S. (2013). Patterns of conflict and enrichment in work-family balance: A three-dimensional typology. *Work & Stress*,

- 27(2), 141-163.
- Ruggeri, K., & Bird, C. E. (2014). *Single Parents and Employment in Europe*. Retrieved from http://ec.europa.eu/justice/gender-equality/files/documents/140502_gender_equality_workforce_ssr3_en.pdf
- Shen, W., Kiger, T.B., Davies, S.E., Rasch, R.L., Simon, K.M. & Ones, D.S. (2011). Samples in applied psychology: Over a decade of research in review. *Journal of Applied Psychology*, 96, 1055 – 1064.
- Siebert, S. D. (1974). Toward a theory of role accumulation. *American Sociological Review*, 39, 567-578.
- Siu, O., Lu, J., Brough, P., Lu, C., Bakker, A. B., Kalliath, T., O'Driscoll, M. Phillips, D.R., Chen, W., Lo, D. Shi, K. (2010). Role resources and work–family enrichment: The role of work engagement. *Journal of Vocational Behavior*, 77(3), 470-480.
- Taris, T., & Kompier, M. (2003). “Challenges of longitudinal designs in occupational health psychology”. *Scandinavian Journal of Work, Environment, and Health*, Vol. 29, pp. 1–4.
- Ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work–home interface: The work–home resources model. *American Psychologist*, 67(7), 545.
- U.S. Bureau, (2015) U.S. Bureau of Labor Statistics. *Mothers Participation in the Labor Force*. https://www.dol.gov/wb/stats/latest_annual_data.htm. Accessed 15th May 2016.
- Wang, J. L. (2004). The difference between single and married mothers in the 12-month prevalence of major depressive syndrome, associated factors and mental health service utilisation. *Soc Psychiatr Epidemiol*, 39, 26-32.
- Wells, J. D., Hobfoll, S. E., & Lavin, J. (1999). When it rains, it pours: The greater impact of resource loss compared to gain on psychological distress. *Personality and Social Psychology Bulletin*, 25(9), 1172-1182.
- Wilkins, R., & Bursian, O. (2013). *One in Four Children from Single Parent Families Live in Poverty*. Retrieved from <http://arrow.monash.edu.au/hdl/1959.1/1130760>
- Zabkiewicz, D. (2010). The mental health benefits of work: do they apply to poor single mothers? *Social Psychiatry and Psychiatric Epidemiology*, 45(1), 77-87.
- Zhou, N., & Buehler, C. (2016). Family, employment, and individual resource-based antecedents of maternal work–family enrichment from infancy through middle childhood. *Journal of occupational health psychology*, 21(3), 309-321.

CHAPTER 3: SOCIAL SUPPORT, WORK HOURS AND HEALTH: A COMPARATIVE STUDY OF SOLE AND PARTNERED AUSTRALIAN MOTHERS

Robinson, L.D., Magee, C.A., & Caputi, P. (2014). Social support, work hours and health: A comparative study of sole and partnered Australian mothers. *Women's Studies International Forum*, 42, 19 – 27.

3.1 Abstract

Existing research indicates that sole working mothers have poorer health and well-being than partnered working mothers. The purpose of this comparative study was to investigate whether social support and work hours explained health and well-being differences between sole and partnered Australian sole working mothers. Using data from the Household, Income and Labour Dynamics in Australia (HILDA), the results indicated that sole working mothers have poorer mental and physical health relative to partnered working mothers. Social support and work hours were found to be significant moderators of these associations, such that the poorer health of sole mothers was more pronounced with lower social support and fewer working hours. This comparative study addresses a gap in knowledge on the health differences between mothers.

Social support, work hours and health: A comparative study of sole and partnered Australian mothers

3.2 Introduction

Sole mothers (that is, mothers without a co-resident parent) experience greater financial hardship and social exclusion, and poorer health and well-being, such as, chronic stress and depression, compared with partnered mothers (Afifi, Cox, & Enns, 2006; Burstrom et al., 2010; Cairney, Boyle, Offord, & Racine, 2003; Crosier, Butterworth, & Rodgers, 2007; Maslach, Schaufeli, & Leiter, 2001). These findings are important because poor health and well-being have implications for daily functioning, work, and familial and parental roles (Cicchetti & Toth, 1990; Price, Nam Choi, & Vinokur, 2002). Furthermore, poorer maternal health and well-being are related to hostile parenting and more behavioural problems in children (ABS., 2008; Cummings & Davies, 1994; Edwards & Maguire, 2011; Lara-Cinisomo & Griffin, 2007; Phelan, Khoury, Atherton, & Kahn, 2007; Spence, Najman, & Bor, 2002).

These are major concerns given that the proportion of sole mothers has increased in many countries, including Australia, the United States, and the United Kingdom (Baxter, 2013; Bureau, 2012). These increases reflect a number of factors including social changes surrounding divorce, and an increase in children born out of wedlock (Amato, 2000; OECD, 2012). A second important trend is the increasing proportion of sole mothers in paid employment (Baxter, 2013; Casey & Maldonado, 2012). In Australia, for instance, there has been an increase from 44% in 1991 to 57% in 2011; this increase has been at a rate faster compared with partnered mothers (Baxter, 2013). This likely reflects the higher number of sole mothers (ABS., 2008), Australian government policy changes requiring sole mothers to work or receive lowered benefits (Commonwealth of Australia, 2005; Costello, 2005) and the greater need for employment due to the rising costs of living (Williams, 2013).

Previous research on working mothers has typically focused on mothers in dual parent families (Afifi et al., 2006; Marshall & Burnett, 1993; Parasuraman & Greenhaus, 2002) and, there has been little comparative research investigating the health and well-being of sole and partnered working mothers. The limited number of studies focusing on sole working mothers have shown that, despite potential health benefits of employment, sole working mothers have poorer health and well-being compared with partnered working mothers (Afifi et al., 2006; Minotte, 2012). For instance, Afifi et al. (2006) and Cairney et al. (2003) reported higher levels of depression in sole working mothers compared with partnered working mothers. While this research has shed some light on the health and well-

being of sole working mothers, there is limited understanding of the factors underlying these findings (Cairney et al., 2003). Therefore, this comparative study aims to further investigate the psychological and physical health differences between sole and partnered working mothers by examining potential moderators of these associations.

Role strain theory

Role strain theory could provide an important framework to investigate health and well-being in sole mothers. Role strain theory (Marks, 1977; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011; Spencer-Dawe, 2005) proposes that individuals have finite resources (such as time, energy and attention) available to balance roles, such as work and family obligations. Within this context, resources are “objects, personal characteristics, conditions or energies that are valued in their own right or that are valued because they act as conduits to the achievement or protection of resources” (Hobfoll, 2001, p. 339). Resources are valued and sought after by individuals and/or society as a whole (Grandey & Cropanzano, 1999; Hobfoll, 1989), and have important implications for mental and physical health (Hobfoll, 2001; Wright & Cropanzano, 1998). For example, dwindling resources are associated with burnout (Wright & Cropanzano, 1998), and a perceived lack of social support is related to high levels of depression (Md-Sidin, Sambasivan, & Ismail, 2010). Importantly, when an individual manages multiple, competing roles (such as work and family) it can exhaust available resources, and consequently generate role strain (Hargis, Kotrba, Zhdanova, & Baltes, 2011; Kinnunen, Feldt, Geurts, & Pulkkinen, 2006; Michel et al., 2011). In turn, prolonged role strain has the potential to impair health, resulting in depressive symptoms and burnout (Ahola et al., 2006), and can also inhibit the ability to recover from stressors, further contributing to poor health and well-being.

Sole working mothers may experience poorer health and well-being because of greater role strain due to higher demands of parenting alone, and lower resources available to balance work and family demands compared to partnered mothers, yet studies comparing these two groups of women are limited. For example, working mothers face many demands in meeting work and family obligations, and resources play a critical role in their ability to meet these demands. A combination of low resources and high demands leads to difficulties meeting multiple responsibilities (Goode, 1960; Kinnunen et al., 2006). It is feasible then that sole working mothers experience greater role strain because they have fewer resources (e.g., time and social support) available to balance work and family demands compared with partnered working mothers (Burke & Greenglass, 1988). Access to fewer resources could underlie the health and well-being problems observed in sole working mothers relative to partnered working mothers. Although working mothers rely on numerous resources to help meet the demands of work and family, as noted below, social support and

time could be two resources especially relevant to sole mothers, and are investigated in this paper.

Social support

While there are numerous conceptualisations of social support in the literature, this study focuses on perceived social support, that is, the support individuals perceive is available to them from others in their lives (Hewitt, Turrell, & Giskes, 2012). Perceived social support is the “general sense that one is loved and cared for by others and that these others would help once they are really needed” (Schwarzer & Leppin, 1991, p. 102). These perceptions potentially improve coping, self-esteem and competence, and social support provides a sense of belonging and attachment (Berkman, Glass, Brissette, & Seeman, 2000; Gotlieb, 2000). Moreover, perceived social support contributes to health outcomes such as improved mental and physical well-being (Schwarzer & Leppin, 1991).

The psychological and practical benefits of social support make it an important resource for mothers in meeting work and family demands (Md-Sidin et al., 2010). Perceived social support could benefit working mothers by improving self-esteem and coping skills (Gotlieb, 2000), meeting the innate human needs of belonging and companionship (Berkman, 1995). Further this perceived support is considered to assist in coping with stressful events as individuals have greater resources. Consequently perceived social support is important when considering the resources and demands of working mothers.

There is evidence that sole working mothers have lower perceived social support levels than partnered working mothers, which could be attributable to lack of a resident spouse (Cairney et al., 2003). Furthermore, Cairney et al. (2003) found that perceived social support, together with stress, accounted for nearly 40% of the differences in depression between sole and partnered working mothers. These differences may be attributed to the protective effects of perceived social support (Hewitt et al., 2012; Schwarzer & Leppin, 1991). Therefore, it is possible that inadequate perceived social support contributes to greater role strain in sole mothers, which could partially explain their poorer health and well-being compared to partnered working mothers.

Work hours

Time is another valuable resource for working mothers, and there are many factors that can place a demand on time. There is considerable evidence that many mothers experience time poverty, that is, a lack of time to meet their work and family obligations (Harvey & Mukhopadhyay, 2007). Family responsibilities, such as parenting, maintaining relationships with spouse or non-resident parent, and managing a household, place great

demands on mothers by limiting the amounts of time they have to meet different roles. Further demands can be placed on time for mothers who combine paid employment with a family. For example, time spent at work takes away the time available to meet family obligations, and these effects may be more pronounced with increasing work hours. That is, role strain could be more pronounced when the mother has less time to meet work and family roles. This could explain why longer work hours are often linked with poorer health and well-being in mothers (Floderus, Hagman, Aronsson, Marklund, & Wikman, 2009). Furthermore, there is evidence that many sole mothers have greater constraints on their time than partnered mothers (Craig, 2004). Even so, research has found no significant difference between partnered and sole mothers in the amount of active child care engaged in by mothers (Craig, 2004). Therefore, long work hours combined with sole responsibility for childcare in sole mothers may result in greater strain due to higher time demands and fewer resources, and thus poorer health and well-being in these women (Michel et al., 2011). However, these associations are yet to be established in sole working mothers.

Thus, this paper examines the role of work hours, and proposes that long work hours lead to poorer health and well-being in sole mothers. In summary, work hours is chosen as a key moderating variable in this study as work hours represent a demand on working mothers' time. This is because sole mothers are likely more time poor than partnered mothers so long work hours are expected to have a greater impact on the level of strain they experience, and could translate into poorer physical and mental health.

The present study

Existing studies suggest that sole mothers have poorer health and well-being relative to partnered working mothers, yet there is little comparative research on these two groups of mothers. These differences may be partially explained by their lower social support and higher time demands. These two factors may contribute to poorer health and well-being by generating greater role strain in sole than partnered working mothers. Therefore, this comparative research examines the relationship between marital status and self-reported mental and physical health and the moderating roles of social support and work hours in sole and partnered Australian mothers. Self-reported health is a strong predictor of health outcomes and is therefore a valid measure of health (Millunpalo, Vouri, Oja, Pasanen, & Urponen, 1997; Singh-Manoux et al., 2006). In this paper, self-reported health is measured by the mental and physical health components of the Short Form-36 Health Survey (SF-36) (Ware & Kosinski, 2001) and the Kessler Psychological Distress Scale (K10) (Andrews & Slade, 2001). This research, using the Household, Income and Labour Dynamics in Australia (HILDA) data, offers new insight into health differences between sole and partnered working mothers.

3.3 Methods

Data from Wave 8 (2008) of the Household, Income and Labour Dynamics in Australia (HILDA) Survey were used in this study. HILDA is a household-based panel study collecting data about labour market dynamic, family dynamics, and economic and subjective well-being (HILDA, 2003). The HILDA survey used a multi-stage approach to select random households across Australia, to yield a sample that is broadly representative of the Australian population (Wooden & Watson, 2001). Self-completion questionnaires and interviews were used to collect data. Ethics approval for data collection was granted from the University of Melbourne and from our University's Human Research Ethics Committee.

Wave 8 comprises data from 682 households and 13,969 individuals. For the purpose of this paper the sample was limited to working mothers with a dependent child under 18 years. The final sample included 993 working mothers (i.e., females with a dependent child who worked in paid employment); 200 were sole mothers and 793-partnered mothers.

Measures

Self-reported physical and mental health

The Short Form-36 Health Survey (SF-36) (Ware & Kosinski, 2001) was used to assess functional self-reported physical and mental health. This 36 item-scale measures health across eight domains, comprising two components: Mental Health Component (MHC) and Physical Health Component (PHC). MHC's four domains (Cronbach's $\alpha = .78$) are Vitality (4 items); Social Functioning (2 items); Role-emotional (3 items); and Mental Health (5 items); and the Cronbach's alpha in this study was .78. PHC's four domains (Cronbach's $\alpha = .77$) are: Physical Functioning (10 items); Role-Physical (4 items); Bodily Pain (2 items); General Health (5 items); and the Cronbach's alpha for this study was .77. The SF-36 has been used extensively in the literature, and demonstrates good internal consistency and discriminant validity (Crosier et al., 2007).

Psychological distress

This construct was measured using the widely used 10-item Kessler scale (K10) which assesses non-specific psychological distress during the four weeks prior to the study (Andrews & Slade, 2001). Items include; In the last four weeks, about how often did you feel tired for no good reason? ... nervous? ...so nervous that nothing could calm you down? ...hopeless? Responses are given on a 5-point Likert scale from 'none of the time' (1) to 'all of the time' (5). The Cronbach's alpha for this scale in the present sample was .88.

Marital status

This study focused on working mothers, defined as female respondents in paid work (full-time or part-time) with parenting responsibilities of a child less than 18 years. We examined two marital status categories: partnered working mothers and sole working mothers. Partnered mothers are defined as being in a couple relationships cohabiting together (87% legally married; 13% de facto); sole working mothers were defined as not in a relationship cohabiting together.

Social support

The social support measure was designed by the HILDA study team to assess an individual's perception of the social support they receive from friends and family (HILDA, 2003). This measure has been used in previous studies (Crosier et al., 2007; Hewitt et al., 2012). The 10-item scale included the following items: I have no one to lean on in times of trouble; I often feel very lonely; I enjoy the time I spend with the people that are important to me (reverse coded); I seem to have a lot of friends (reverse coded); People don't come and visit as much as I would like; I often need help from other people but can't get it; I don't have anyone that I can confide in; There is someone who can always cheer me up when I am down; When I need someone to help me out, I can usually find someone; and When something's on my mind, just talking with the people I know can make me feel better. Items are rated on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7) and the Cronbach's alpha, for the current data, was .85.

Work status

Participants were asked to indicate the number of hours they worked in a typical week, including paid or unpaid overtime. Responses were coded as less than 21 h per week, 21 to 34 h, 35 to 39 h, and 40 or more hours per week. These categories are consistent with the Australian Bureau of Statistics (ABS, 2006).

Control variables

Based on theory and previous studies showing an association with health and well-being, the following control variables are included in this study: education (Higgins, Lavin, & Metcalfe, 2008), relative socio-economic advantage and disadvantage, a composite measure of resource based factors including income, and prestige based factors such as occupational status (ABS, 2011; Berry & Welsh, 2010), age (Floderus, Hagman, Aronsson, Marklund, & Wikman, 2008), age of youngest child in the household (Hewitt, Baxter, & Western, 2006), number of children in the household (Floderus et al., 2008), position held at work (manager/professional, technical, and community, administration and sales), household income (Berry & Welsh, 2010), job satisfaction (Faragher, Cass, & Cooper, 2005), and life satisfaction (Koivumaa-Honkanen et al., 2000).

Statistical analysis

Data were analysed using SPSS version 19 (IBM Corp, 2010). Chi-square and analysis of variance (ANOVA) were used to investigate univariate differences in demographic variables between sole and partnered working mothers. The multivariate associations of marital status and social support and work hours with MHC, PHC and psychological distress were examined using general linear modelling. This step involved entering marital status and social support and work hours as independent variables with the following variables were included as covariates: country of birth, mother's age, position at work, relative socio-economic advantage and disadvantage, age of youngest child, job satisfaction, life satisfaction and number of resident children. In the second step, interaction terms between marital status and social support, and between marital status and work hour were added separately to examine the differences between sole and partnered mothers that were moderated by social support and work hours. Results were reported at significance level $p < .05$.

3.4 Results

Demographics

Table 1 shows the descriptive statistics for work hours, education level and relative socio-economic advantage and disadvantage; as well as the level of significance of by marital status. Results of the chi square analysis showed that education and marital status were related ($p < .001$). A higher proportion of partnered mothers than sole mothers held a tertiary qualification ($p < .001$). Chi square analysis also showed that socioeconomic status and marital status were related ($p < .001$). Sole mothers were more likely than partnered mothers to be classified as low relative socioeconomic advantage and disadvantage. Finally, chi square analysis showed work hours and marital status were also ($p = .038$). Sole mothers were more likely to be working at least a standard working week (35 h) than partnered mothers.

Table 3.1 also shows sole and partnered mothers' descriptive statistics for social support, mental health, physical health psychological distress, number of children and age. Compared with partnered mothers, sole mothers had significantly lower social support, mental and physical health, and psychological distress. They also had significantly fewer children than partnered mothers.

Table 3.1 Descriptive statistics and significance levels for sole and partnered mothers.

	Sole		Partnered		p
	n	%	n	%	
Education					.001
Tertiary	48	24.0	281	35.4	
Certificate/diploma	86	43.0	246	31.0	
Up to year 12	66	33.0	266	33.5	.000
Socioeconomic advantage/disadvantage					
Low	72	36.0	159	20.1	
Mid	83	41.5	326	41.1	
High	45	22.5	308	38.8	
Work hours					
Less than 21	47	23.5	25	32.3	.038
21 to 34	52	26.0	215	27.1	
35 to 39	38	19.0	135	17.0	
40+	63	31.5	187	23.6	
	M	SD	M	SD	p
Age	41.44	9.44	40.60	7.03	.164
SS	5.36	1.01	5.76	.87	.000
MHC	72.79	18.99	82.49	10.36	.000
PHC	78.78	19.36	87.69	8.89	.000
K10	16.48	6.37	13.78	3.97	.000
Number of children	2.12	1.06	2.31	.96	.012
Life satisfaction	7.50	1.77	8.07	1.07	.000
Job satisfaction	7.75	1.77	7.91	.38	.154

Health of employed mothers

Results from the general linear modelling are presented in Table 3.2. These findings indicate that sole mothers in paid employment had poorer mental ($\beta=6.36$, $p<.001$) and physical health ($\beta=6.93$, $p<.001$) compared with partnered mothers in paid employment. Sole mothers also had significantly poorer K10 health scores ($\beta = -1.34$, $p<.001$) indicating that working sole mothers have significantly poorer well-being compared with partnered

working mothers.

Interactions

To determine whether the associations between marital status and health differed depending on work hours, we added the interaction term marital status by work hours to the model. The results of this analysis are presented in Table 3.2 and show that work hours moderated the relationship between marital status and PHC ($\beta=5.32$, $p=.002$). Pairwise comparisons were used to examine any differences within partnered and sole mothers depending on their work hours. The results indicated that there were no significant differences in PHC for partnered mothers across work hours ($F(3,940)=.38$, $p=.77$) (Fig. 3.1). However, there were significant differences in PHC for sole mothers across work hours ($F(3,940)=7.50$, $p<.001$). Sole mothers working more than 40 h ($M=83.84$, $SD=16.44$) had significantly higher PHC than sole mothers working 35 to 39 h ($M=75.10$, $SD=20.35$), 21 to 34 h ($M=77.98$, $SD=19.10$), and less than 21 h ($M=75.85$, $SD=21.53$).

The interaction results indicated that social support moderated the differences between sole and partnered mothers in relation to the MHC ($\beta=5.29$, $p<.001$) (Fig. 3.2). Follow up analysis using correlations showed a positive relationship between social support and MHC in both groups, but this relationship was stronger for sole mothers ($r=.526$, $p<.001$) than partnered mothers ($r=.411$, $p<.001$). The social support- by-marital status interaction was also significant for the K10 ($\beta=1.54$, $p<.001$; Table 2). There was an inverse relationship between social support and the K10, which was stronger for sole ($r=-.533$, $p<.001$) than partnered mothers ($r=-.432$, $p<.001$) (Fig. 3.3).

Table 3.2 General linear model results of health outcomes (mental health, physical health and psychological distress) between single and partnered mothers, and interaction effects of health outcomes and social support and work hours.

	MHC		PHC		K10	
	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
Education	.410	.664	1.212	.298	1.86	.156
Position at work	.478	.620	3.918	.020	1.20	.301
Socio-economic advantage/disadvantage	.315	.714	.694	.500	1.04	.354
Work hours	.454	.714	2.684	.046	.21	.89
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Marital status	6.361	.000	6.931	.000	-1.34	.000
Age	.016	.807	-.151	.024	-.004	.875
Age of youngest child	.049	.588	-.121	.189	.017	.603
Number of children	-.457	.231	-.303	.423	-.018	.895
Income	-.001	.214	-.001	.267	.000	.697
Life satisfaction	2.729	.214	1.728	.000	-.701	.000
SS	4.927	.000	2.265	.000	-1.95	.000
Marital Status \times SS	-5.294	.000	2.23	.136	1.542	.000
Marital Status \times work hours	1.34	.260	5.32	.002	2.86	.036

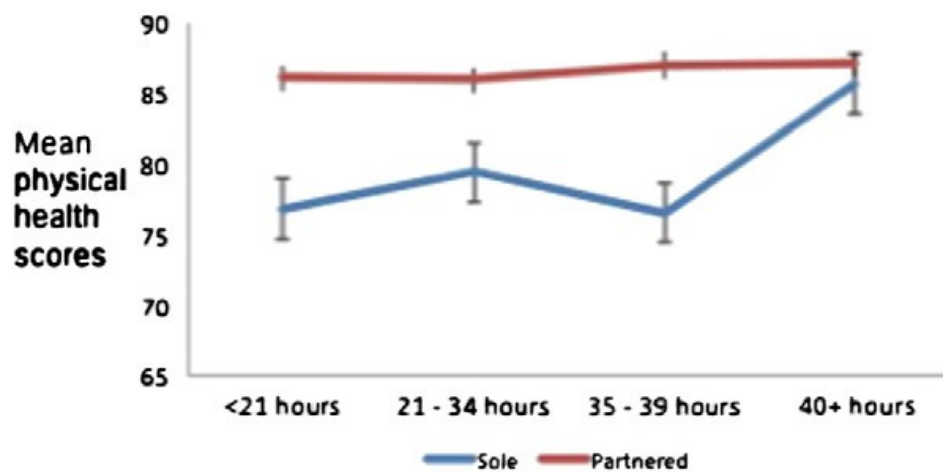


Figure 3.1 Estimated marginal means of the physical health component for sole and partnered mothers at each category of work hours.

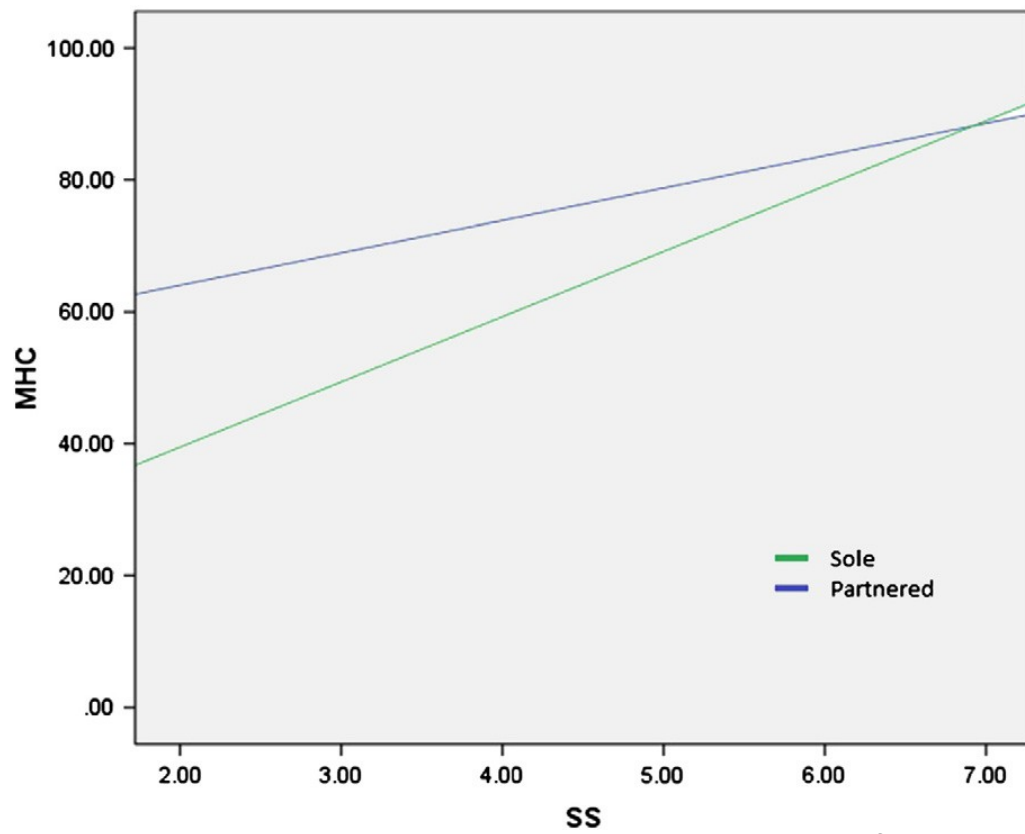


Figure. 3.2 Interaction between social support and marital status for Mental Health Component (MHC)

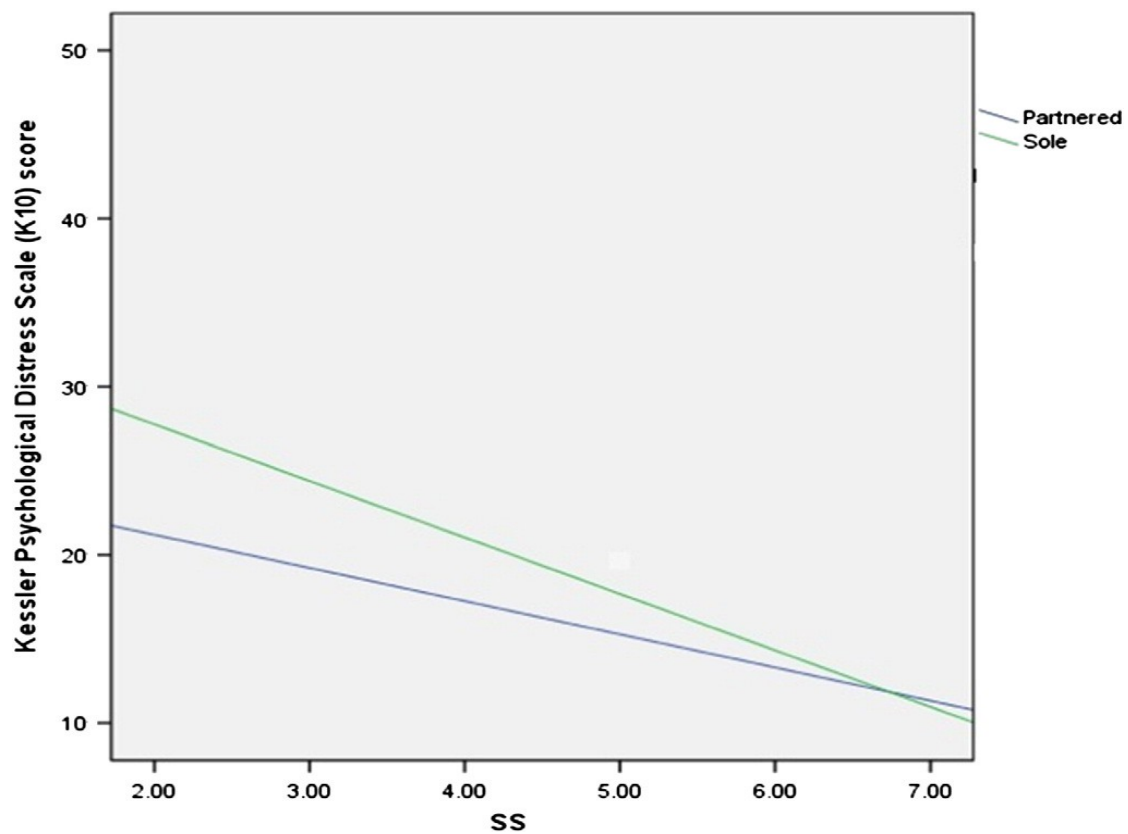


Figure. 3.3 Interaction between social support and marital status for psychological distress (K10).

3.5 Discussion

Consistent with previous research (Bull & Mittelmark, 2009; Cairney et al., 2003), this study found that sole working mothers had poorer physical and mental health compared to partnered working mothers. These results are also consistent with a number of studies showing that sole mothers experience a range of disadvantages, such as poverty and poor health, compared to partnered mothers (Afifi et al., 2006; Bruck, Allen, & Spector, 2002; Cairney et al., 2003; Crosier et al., 2007). This study provides further support to literature on the health and well-being of working mothers, particularly since we utilised multiple measures of both mental and physical health.

The key contribution of the present paper is that we explored the potential factors that could contribute to the mental and physical health differences between sole and partnered working mothers. In particular, by using role strain theory as a guiding framework, we demonstrated the moderating role of social support and work hours on the relationship between marital status and health and well-being.

Perceived social support

Our results showed that the relationship between perceived social support and mental health was stronger in sole mothers, suggesting that sole mothers are at greater health risks than partnered mothers when experiencing low social support. This finding is important because, consistent with previous research (Cairney et al., 2003), sole working mothers had lower levels of social support compared with partnered working mothers. Lower support, and therefore fewer resources, means that sole mothers could face greater difficulties meeting their work and family obligations (Goode, 1960; Marks, 1977). Further, with low social support, they are not receiving the critical protective effects associated with social support. Accordingly, sole mothers may be more likely to experience higher role strain, which may partly contribute to their poorer health and well-being (Cairney et al., 2003; Crosier et al., 2007; Travis et al., 2004). In other words, reduced access to this resource coupled with greater risk of inadequate social support is a harmful combination when considering the impact its health and well-being.

Work hours

Work hours were also found to moderate the physical health differences between sole and partnered working mothers. Interestingly, sole mothers working more than 40 h had the highest physical health levels of all categories in sole and partnered mothers. Sole mothers' lowest levels were when working less than 21 h and full time (24 to 39 h). So, full-time work may have negative effect on physical health, whereas longer hours than full-time

may generate more benefits through greater access to income. These results differ from previous research on long work hours, which show an association with poor health (Floderus et al., 2009; van der Hulst, 2003). This difference may be because this study uniquely measured physical health in addition to psychological health, and unlike previous research we studied sole mothers (Floderus et al., 2009; van der Hulst, 2003).

There are several possible explanations within the context of role strain theory for this finding. Longer work hours are often associated with access to higher income, which in turn can improve health and well-being. Consequently, the individual has more physical resources available (e.g., childcare) which facilitate managing the demands of work and family. As a result, this could minimise any resulting role strain. Other positive effects of work, such as skill development, may also spill over to the family domain. This spill over is known as work–family enrichment, which has potential to benefit health and well-being may also be occurring (Greenhaus & Powell, 2006).

However, the absence of resources in mothers may have a larger impact on sole than partnered mothers. Low levels of resources make it harder for sole mothers to meet demands from multiple roles, as evidenced by the stronger inverse relationship between low resources and health and well-being in sole mothers than partnered mothers, and this relationship likely explains the greater differences in health and well-being across work hours in mothers. Testing work hours as a moderator contributes to the literature on working mothers and further research is encouraged to understand why health and well-being differs across work hours in sole working mothers.

Implications

The present findings suggest that components of role strain could at least partially explain the health and well-being differences between sole and partnered working mothers. We showed that working mothers may have poorer health and well-being because of lower social support, and that the effects of time limitations could be greater in sole working mothers. Therefore, according to role strain theory, sole working mothers may experience difficulties meeting their role obligations leading to greater role strain.

A number of social and organisational implications also arise from these findings. In particular, strategies aimed at increasing sole mothers' resources, such as social support, and, consequently reducing strain, may therefore improve their health and well-being. Organisations can address social support by fostering social interactions within the workplace, such as providing opportunities for staff to socialise with each other. Additionally, childcare is an important when a child is ill or during school holidays. These two strategies, fostering social support in the workplace, and developing an understanding of challenges with childcare, support sole mothers to meet their role obligations while maintaining health

and well-being.

The finding that sole mothers' health and well-being varies significantly across work hours is novel. There are three ways workplaces can use this finding to benefit sole mothers. Firstly, by tailoring work hours to promote health and well-being; secondly, by providing greater flexibility in start and finish times, and options to work remotely; and thirdly, facilitating sole mothers who choose to work longer than standard hours. One approach to facilitating longer hours is by providing onsite childcare. Implementing strategies is important because healthy employees benefit organisational outcomes and workplace productivity (McNall, Nicklin, & Masuda, 2010).

Strengths and limitations

This study has a number of limitations. The cross-sectional method of this study limits the ability to make causal inferences. Thus, it is not possible to conclude the direction and nature of the associations. Furthermore, the self-report data may result in possible recall and response biases. We also did not study mothers who are not employed or who have left the workforce due to physical and psychological issues relating to work and parenting responsibilities; these mothers would likely contribute more insight into the complexities of the health and well-being and working mothers' work-family experiences. Marital status consisted of only two categories: sole mothers, including divorced, separated, never married and widowed mothers; and partnered mothers; including mothers in de-facto and marriage. Thus assuming experiences and relationships are similar regardless of how or why mothers are sole or partnered. Future studies should therefore include more information regarding the nature of marital status. Furthermore, education is an important determinant of health and studying the interaction of level of education and work hours would provide further insight in this population. This study did not directly measure role strain, which will need to be considered in future research to better understand the health disadvantages experienced by many sole working mothers. Finally, even though this paper provides important insight into the role of individual resources and household factors on the health of working mothers, it is limited by not considering the social context underpinning differences between sole and partnered mothers. Baird (2011) argues that legislation affects social norms related to work and employment. As such, government work, family and care policies can both facilitate or hinder working mothers. Societies, such as Denmark and France, where work and family is considered a social issue, and raising children is seen as an important contribution to society, offer extensive supports to mothers including mandated parental leave, shortened work hours, and publicly subsidised child care (Craig & Mullan, 2010). This approach reduces demands on households, and allows greater choice for mothers in how to combine work and family. On the other hand, other countries, such as

Australia, see raising children as the private responsibility of families, with government policies providing less support to parents (Craig and Mullan, 2010). In these cases there is a tendency towards traditional gender norms with little development in areas such as gender equality in workforce participation (Craig & Mullan, 2010). Gender inequality is linked to poorer division of child and family responsibilities with women taking on more responsibility. In these cases, women are likely to have fewer choices in how to manage work and family roles. Without government policies in place to provide support and resources to working mothers there is greater difficulty combining work and family, which can be particularly detrimental to sole mothers given their lower resource levels. It is therefore paramount that ongoing studies consider the role of state or government policies on resources levels in sole and partnered working mothers, and that such research findings are considered by policy makers and organisations alike.

Despite these limitations, this study has several strengths, the primary one being the comparative nature of the study, providing insight into the different health outcomes for sole and partnered mothers when engaging in paid employment. Other strengths include the use of multiple, well-validated scales to assess physical and mental health, and the relatively large sample size of working mothers. Furthermore, the assessment of social support and work hours provides a novel insight into the potential factors that influence health differences in these mothers. However, given the important influence of socio-economic status (SES), that is, an individual's access to social and material resources and their capacity to engage in society (ABS, 2006), comparing sole and partnered mothers within socio-economic status would allow for further understanding of the role of marital status alone on the work-family interface in mothers.

3.6 Conclusion

Sole working mothers experience difficulties meeting their work and family obligations due to limited resources and high demands, and consequently may experience greater role strain, which has implications for their health and well-being. The present comparative study supports previous research showing that sole working mothers have poorer health and well-being compared with partnered working mothers. Furthermore, within the context of role strain theory, these differences appear most pronounced in sole working mothers when social support is lower and time demands are greater (as reflected by full-time work hours). This study supports ongoing research on sole working mothers, a disadvantaged group of women in society, especially given the gravity of the repercussions for poor health and well-being on these women.

3.7 Acknowledgements

There was no funding associated with this study and no financial conflicts of interest. Further, Ms Laura Robinson had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Social Services (DSS) and is managed by the Melbourne Institute of Applied Economic and Social Research (Melbourne Institute). The findings and views reported in this paper, however, are those of the author and should not be attributed to either DSS or the Melbourne Institute.

3.8 References

- ABS (2006). Australian Social Trends, 2006. (ABS cat. no. 4102.0). Canberra: ABS.
- ABS (2008). Mother's day facts and figures. Canberra: Australian Government.
- ABS (2011). Measures of Socioeconomic Status. (ABS cat. no. 1244.0.55.001). Canberra: ABS.
- Afifi, Tracey, Cox, Brian, & Enns, Murray (2006). Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, 41, 122–129.
- Ahola, Kirsi, Honkonen, Teija, Kivimäki, Mika, Virtanen, Marianna, Isometsä, Erkki, Aromaa, Arpo, et al. (2006). Contribution of burnout to the association between job strain and depression: The Health 2000 study. *Journal of Occupational and Environmental Medicine*, 48(10).
- Amato, Paul R. (2000). The consequences of divorce for adults and children. *Journal of Family and Marriage*, 62(4), 1269–1287.
- Andrews, Gavin, & Slade, Tim (2001). Interpreting scores on the Kessler Psychological Distress (K10). *Australian and New Zealand Journal of Public Health*, 25, 494–497.
- Baxter, Jennifer (2013). Parents working out work. Australian Family Trends No.1. Melbourne: Australian Institute of Family Studies.
- Baird, Marian (2011). The state, work and family in Australia. *The International Journal of Human Resource Management*, 22(18), 3742–3754.
- Berkman, Lisa G. (1995). The role of social relations in health promotion. *Psychosomatic Medicine*, 57(3), 245–254.
- Berkman, Lisa G., Glass, Thomas, Brissette, Ian, & Seeman, Teresa E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science and Medicine*,

51, 853–885.

- Berry, Helen L., & Welsh, Jennifer A. (2010). Social capital and health in Australia: An overview from the household, income and labour dynamics in Australia survey. *Social Science and Medicine*, 70, 588–596.
- Bruck, Carly S., Allen, Tammy, & Spector, Paul E. (2002). The relation between work family conflict and job satisfaction: A finer-grained approach. *Journal of Vocational Behavior*, 60(3), 336–353.
- Bull, Torill, & Mittelmark, Maurice B. (2009). Work life and mental wellbeing of single and non-single working mothers in Scandinavia. *Scandinavian Journal of Public Health*, 37(6), 562–568.
- Bureau, Census (2012). Births, deaths, marriages and divorces. Washington: U.S. Census Bureau.
- Burke, Ronald J., & Greenglass, Esther R. (1988). Work and family precursors of burnout in teachers: Sex differences. *Sex Roles*, 18(3/4).
- Burstrom, Bo, Whitehead, Margaret, Clayton, Stephen, Fritzell, Sara, Vannoni, Francesca, & Costa, Guiseppe (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes — The example of Italy, Sweden and Britain. *Social Science and Medicine*, 70, 912–920.
- Cairney, John, Boyle, Michael, Offord, David R., & Racine, Yvonne (2003). Stress, social support and depression in single and married mothers. *Social Psychiatry and Psychiatric Epidemiology*, 38, 442–449.
- Casey, Timothy, & Maldonado, Laurie (2012). Worst-off — Single-parent families in the United States. A cross-national comparison of single-parenthood in the U.S. and sixteen other high-income countries. New York: Legal Momentum.
- Cicchetti, D., & Toth, heree (Eds.). (1990). *ante*, Vol. 4, Rochester, NY: University of Rochester Press.
- Commonwealth of Australia, C. O. (2005). *Welfare to work: Budget 2005-06*. (Canberra).
- Costello, Peter (2005). *Transcript of budget speech 2005–2006*. Canberra: Commonwealth of Australia.
- Craig, Lyn (2004). Time to care: A comparison of how couple and sole parent households allocate time to work and children. Sydney: Social Policy Research Centre.
- Crosier, Timothy, Butterworth, Peter, & Rodgers, Bryan (2007). Mental health problems among single and partnered mothers: The role of financial hardship and social support. *Social Psychiatry and Psychiatric Epidemiology*, 426–413.
- Cummings, Mark E., & Davies, Patrick T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry*, 35, 73–112.
- Edwards, Ben, & Maguire, Brigit (2011). *Parental mental health*. LSAC Annual Statistical

- Report. Melbourne: AIFS.
- Faragher, E. Brian, Cass, M., & Cooper, Cary L. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine*, 62, 105–112, <http://dx.doi.org/10.1136/oem.2002.006734>.
- Floderus, Birgitta, Hagman, Maud, Aronsson, Gunner, Marklund, Staffan, & Wikman, Anders (2008). Self-reported health in mothers: The impact of age, and socioeconomic conditions. *Women & Health*, 47, 63–86.
- Floderus, Birgitta, Hagman, Maud, Aronsson, Gunner, Marklund, Saffan, & Wikman, Anders (2009). Work status, work hours and health in women with and without children. *Occupational and Environmental Medicine*, 66(10), 704–710.
- Goode, William J. (1960). A theory of role strain. *American Sociological Review*, 25, 483–496.
- Gotlieb, Benjamin (Ed.). (2000). *Selecting and planning support interventions*. London: Oxford University Press
- Grandey, Alicia A., & Cropanzano, Russell (1999). The conservation of resources model applied to work–family conflict and strain. *Journal of Vocational Behavior*, 54, 350–370.
- Greenhaus, Jeffrey H., & Powell, Gary N. (2006). When work and family are allies: A theory of work–family enrichment. *Academy of Management Review*, 31(1), 72–92.
- Hargis, Michael B., Kotrba, Lindsey M., Zhdanova, Ludmila S., & Baltes, Boris B. (2011). What's really important? Examining the relative importance of antecedents to work–family conflict. *Journal of Managerial Issues*, 13(4), 386–408.
- Harvey, Andrew S., & Mukhopadhyay, Arun K. (2007). When twenty-four hours is not enough: Time poverty of working parents. *Social Indicators Research*, 82, 57–77, <http://dx.doi.org/10.1007/s11205-006-9002-5>.
- Hewitt, Belinda, Baxter, Janeen, & Western, Mark (2006). Family, work and health: The impact of marriage, parenthood and employment on self-reported health of Australian men and women. *Journal of Sociology*, 42(1), 61–78, <http://dx.doi.org/10.1177/1440783306061353>.
- Hewitt, Belinda, Turrell, Gavin, & Giskes, Katrina (2012). Marital loss, mental health and the role of perceived social support: Findings from six waves of an Australian population based panel study. *Journal of Epidemiology and Community Health*, 66(4), 308–314, <http://dx.doi.org/10.1136/jech.2009.104893>.
- Higgins, Claire, Lavin, Teresa, & Metcalfe, Owen (2008). *Health impacts of education: A review*. Dublin: Institute of Public Health in Ireland.
- HILDA (2003). *HILDA Survey Annual Report 2002*. Melbourne: Melbourne Institute of Applied Economic and Social Research, The University of Melbourne.

- Hobfoll, Stevan E. (1989). Conservation of resources: A new attempt at conceptualising stress. *American Psychologist*, 44, 513–524.
- Hobfoll, Stevan E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50(3), 337–421.
- IBM Corp (2010). *IBM SPSS Statistics for Windows*, Version 19.0. Armonk, NY: IBM Corp.
- Kinnunen, Ulla, Feldt, Taru, Geurts, Sabine, & Pulkkinen, Lea (2006). Types of work–family interface: Well-being correlates of negative and positive spillover between work and family. *Scandinavian Journal of Psychology*, 47, 149–162.
- Koivumaa-Honkanen, Heli, Honkanen, Risto, Viinamaki, Heimo, Heikkila, Katrina, Kaprio, Jaakko, & Koskenvuo, Markku (2000). Self-reported life satisfaction and 20-year mortality in healthy Finnish adults. *American Journal of Epidemiology*, 152, 983–991.
- Lara-Cinisomo, Sandraluz, & Griffin, Beth A. (2007). Factors associated with major depression among mothers in Los Angeles. *Women's Health Issues*, 17, 316–324.
- Marks, Stephen R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, 42(6), 921–936.
- Marshall, Nancy L., & Burnett, Rosalind C. (1993). Work–family strains and gains among two-earner couples. *Journal of Community Psychology*, 21, 64–78.
- Maslach, Christina, Schaufeli, Wilmar B., & Leiter, Michael P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422.
- McNall, Laurel A., Nicklin, Jessica M., & Masuda, Aline D. (2010). A meta-analytic review of the consequences associated with work–family enrichment. *Journal of Business Psychology*, 25, 381–396.
- Md-Sidin, Samsinar, Sambasivan, Murali, & Ismail, Ixzhairi (2010). Relationship between work–family conflict and quality of life: An investigation into the role of social support. *Journal of Managerial Psychology*, 25(1), 58–81.
- Michel, Jesse S., Kotrba, Lindsey M., Mitchelson, Jacqueline K., Clark, Malissa A., & Baltes, Boris B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior*, 32(5), 689–725.
- Millunpalo, Seppo, Vouri, Ikka, Oja, Pekka, Pasanen, Matti, & Urponen, Helka (1997). Self-rated health status as health measure: The predictive value of self-reported health status on the use of physician services and on mortality in the working-age population. *Journal of Clinical Epidemiology*, 50(5), 517–528.
- Minotte, Krista L. (2012). Family structure, gender, and the work–family interface: Work-to-family conflict among single and partnered parents. *Journal of Family and Economic Issues*, 33, 95–107.
- OECD (2012). Share of births out of wedlock and teenage births. OECD Family Database.

- Parasuraman, Saroi, & Greenhaus, Jeffrey H. (2002). Toward reducing some critical gaps in work–family research. *Human Resource Management Review*, 12(3).
- Phelan, Kieran, Khoury, Jane, Atherton, Helen, & Kahn, Robert S. (2007). Maternal depression, child behaviour and injury. *Injury Prevention*, 13(6), 403–408.
- Price, Richard H., Nam Choi, Jin, & Vinokur, Amiran D. (2002). Links in the chain of adversity following job loss: How financial strain and loss of personal control lead to depression, impaired functioning, and poor health. *Journal of Occupational Health Psychology*, 7(4), 302–312.
- Ruppanner, L., & Huffman, M. L. (2013). Blurred Boundaries: Gender and Work–Family Interference in Cross-National Context. *Work and Occupations*, 41(2), 210–236.
- Schwarzer, Ralf, & Leppin, Anja (1991). Social support and health: A theoretical and empirical overview. *Journal of Social and Personal Relationships*, 8, 99–127.
- Singh-Manoux, Archana, Martikainen, Pekka, Ferrie, Jane, Zins, Marie, Marmot, Michael G., & Goldberg, Marcel (2006). What does self rated health measure? Results from the British Whitehall II and French Gazel cohort studies. *Journal of Epidemiology and Community Health*, 60, 364–372, <http://dx.doi.org/10.1136/jech.2005.039883>.
- Spence, Susan H., Najman, Jake M., & Bor, William (2002). Maternal anxiety and depression, poverty and marital relationship factors during early childhood as predictors of anxiety and depressive symptoms in adolescence. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 43, 457–469.
- Spencer-Dawe, Eileen (2005). Lone mothers in employment: Seeking rational solutions to role strain. *The Journal of Social Welfare and Family Law*, 27(3/4).
- Travis, Linda A., Lyness, Jeffrey, Shields, Cleveland G., King, Deborah A., & Cox, Christopher (2004). Social support, depression and functional disability in older adult primary-care patients. *The American Journal of Geriatric Psychiatry*, 12(3), 265–271.
- van der Hulst, Monique (2003). Long work hours and health. *Scandinavian Journal of Work, Environment & Health*, 29, 178–188.
- Ware, John E., & Kosinski, Mark (2001). *SF-36 Physical and Mental Health Summary Scales: A Manual for Users of Version 1* (Second Edition) Lincoln, RI: Quality Metric Incorporated.
- Williams, Ruth (2013). *Rising price of living in Australia*, Sydney Morning Herald. Sydney: Fairfax Media.
- Wooden, Mark, & Watson, Nicole (2001). The Household, Income and Labour Dynamics in Australia (HILDA) Survey: An introduction to the proposed survey design and plan. (No. 1/00, December 2000). (Melbourne).
- Wright, Thomas, & Cropanzano, Russell (1998). Emotional exhaustion as a predictor of job performance and voluntary turnout. *Journal of Applied Psychology*, 83(3), 486–493.

CHAPTER 4: BURNOUT AND THE WORK-FAMILY INTERFACE: A TWO-WAVE STUDY OF SOLE AND PARTNERED WORKING MOTHERS

Robinson, L.D., Magee, C.A., & Caputi P. (2016). Burnout and the work-family interface: A two-wave study of sole and partnered working mothers. *Career Development International*, 21(1), 31 – 44.

4.1 Abstract

Purpose - The purpose of this paper is to examine whether work-to-family conflict (WFC) and work-to-family enrichment (WFE) predicted burnout in working mothers using conservation of resources theory. The authors also examined whether these relationships varied between sole and partnered working mothers. **Design/methodology/approach** - In total, 516 partnered and 107 sole mothers in paid employment completed an online survey twice, six months apart. **Findings** - WFC was significantly positively related to burnout, and WFE significantly negatively related to burnout. Marital status moderated the inverse relationship between WFE and personal burnout, and this relationship was significant for partnered mothers only. **Research limitations/implications** - Limitations include self-report data, and the sample being highly educated thereby limiting generalizability. **Practical implications** - Providing an enriching and supportive work environment may be an important strategy for minimizing burnout in mothers, particularly for sole mothers. **Social implications** - Employed sole mother's risks of burnout may be higher than for other mothers even when experiencing WFE, which can have implications for their functioning and for family well-being. **Originality/value** - This two-wave study is the first to highlight that sole mothers, who are at risk of greater socio-economic disadvantages, do not benefit from WFE to the same degree as partnered mothers. Future work-family and burnout research should further examine differences based family structure.

Burnout and the work-family interface: a two-wave study of sole and partnered working mothers

4.2 Introduction

Burnout is an important occupational health issue that has a substantial health and well-being, career progression, and organizational productivity. Burnout is typically defined as a state of prolonged and profound physical and psychological exhaustion (Kristensen *et al.*, 2005). Although there are numerous causes of burnout, research has demonstrated that aspects of the work-family interface, particularly in the work to family direction (e.g., work-to-family conflict (WFC) and work-to-family enrichment (WFE)), could be important contributors to burnout. However, few studies have examined the relationships of work-family interface components with burnout in working mothers. This is important given the growing proportion of mothers in paid employment (ABS, 2011), and the increasing recognition that working mothers may be at particular risk of burnout as they manage work and family obligations (Nomaguchi, 2012). Furthermore, very little attention has been paid to work-family experiences of mothers who are not part of a traditional family structure, such as sole working mothers. It is essential to address this gap as family structures are becoming more diverse in many countries (Cohen, 2013), and there is a growing proportion of sole working mothers (Baxter and Renda, 2011).

Sole mothers have a greater risk of socio-economic disadvantages including lower education, greater financial issues and less social support than partnered mothers, and in most cases take sole responsibility for parenting (Baxter and Renda, 2011, ABS, 2008). Thus, sole mothers may face unique challenges (and/or opportunities) when combining work and family roles compared with partnered working mothers. For instance, Ciabattari's (2007) study suggests that conflict between work and family in sole mothers can make it more difficult to maintain stable employment compared to partnered working mothers. According to existing theories, such as the Conservation of Resources theory (Hobfoll and Shirom, 2001), these different experiences could have important implications for outcomes such as burnout. The present two-wave study aims to investigate the relationships of WFC and WFE with burnout in working mothers, and specifically test whether these relationships differ between sole and partnered working mothers.

Burnout

Burnout is a stress-related outcome that occurs following prolonged exposure to chronic stressors (Maslach *et al.*, 2001). Kristensen *et al.* (2005) defined three dimensions of burnout: personal burnout, work burnout, and client-related burnout. This study focuses

on work and personal burnout, as these dimensions may best capture whether mothers attribute any burnout experiences to the work domain, and therefore may inform relevant workplace health strategies and policies. Work burnout is the degree of fatigue and exhaustion that is attributed to work (Kristensen *et al.*, 2005). For instance, work burnout takes into account how exhausted or worn out individuals are from working, or from the thought of working (Kristensen *et al.*, 2005). On the other hand, personal burnout is a generic measure of burnout and refers to the degree of physical and psychological fatigue and exhaustion experienced by a person regardless of occupational status (Kristensen *et al.*, 2005). Personal burnout is not attributed to a specific domain; rather, it is characterized by overall feelings of weakness and susceptibility to illness and emotional and physical exhaustion (Kristensen *et al.*, 2005). Numerous studies indicate that burnout impairs physical and psychological health and productivity and is related to lower job satisfaction (Burke *et al.*, 1996, Schaufeli *et al.*, 2009).

The Conservation of Resources (COR) theory has been used extensively to understand how burnout develops (Hobfoll, 2001, Grandey and Cropanzano, 1999). According to the COR theory, individuals seek to acquire, maintain and protect resources, which are “objects, personal characteristics, conditions, or energies that are valued in their own right” (Hobfoll, 2001, p339). In the present context, examples of resources include work social support and spousal support, self-efficacy, time and money (Grandey and Cropanzano, 1999, Hobfoll, 2001). According to the COR, stress occurs (i) when actual resources are lost, (ii) there is a perceived loss of resources, or (iii) a lack of return following investment of resources (Hobfoll and Shirom, 2001). When experiencing any of these conditions, individuals attempt to minimize stress by taking actions to avoid further resource loss, and to conserve energy. However, additional resources loss often occurs during the process, which can lead to an ongoing spiral of resource losses (Grandey and Cropanzano, 1999). This prolonged cycle of resource loss and depletion can lead to burnout (Innstrand *et al.*, 2008).

Burnout in working mothers

There is a scarcity of research examining whether and how levels of burnout differ between employees based on family structure. Some limited research has demonstrated that employed mothers have a greater risk of burnout compared to employed men or women who are not mothers (Innstrand *et al.*, 2008, Peeters *et al.*, 2005). Working mothers may be at greater risk of burnout compared with other working populations because of greater home demands, and demands on time and energy (Nomaguchi, 2012). Higher burnout not only adversely affects individuals and organizations but also family functioning and child welfare.

It is plausible that sole working mothers are at a greater risk of personal and work

burnout compared with other working parents (e.g. partnered working mothers). Sole mothers have less access to resources such as money, and social support, compared to partnered or married mothers, and they also balance the competing demands of work and family without the contribution from a partner (ABS, 2008). According to a corollary of the COR theory, individuals with relatively greater resources (e.g. partnered compared to sole mothers) are less vulnerable to resource loss, and more capable of resource gains (Hobfoll and Shirom, 2001). In an occupational setting, mothers who have support from their supervisors, family members to help with child care, and money to hire help with household tasks, will be more capable of taking opportunities for professional development and a sense of fulfilment from work than mothers who lack resources. These resources may act to protect an individual against burnout.

A further COR corollary states that individuals with fewer resources are more vulnerable to resource loss (Hobfoll, 2001). Resource loss tends to lead to behaviors aimed at avoiding and preventing further losses, which can drain resources and hinder the capacity to acquire further resources (Hobfoll, 2001). Because sole mothers may have fewer resources to draw on, it could increase their vulnerability to work and personal burnout compared to partnered mothers.

Nevertheless, there may be instances where single parenthood is a positive experience for mothers, particularly following a transition away from a negative relationship. Some women also choose to be sole mothers (e.g., Mannis, 1999), and there is evidence that sole mothers who have never been married have better mental health than those who have divorced (Afifi *et al.*, 2006). Thus, being a sole mother could be beneficial for some women. However, on average, sole mothers tend to have fewer resources given that they do not have a partner to pool resources with. Consistent with the propositions of the COR, it is likely that sole mothers experience greater resource depletion, and stress-related outcomes in both an occupational settings and in general. Correspondingly, we propose the following hypothesis:

H1. Sole working mothers will have higher levels of work and personal burnout compared with partnered working mothers.

Aspects of the work-family interface could provide important insight into burnout in working mothers. For example, previous research shows that components of the work-family interface, such as WFC and WFE, are associated with burnout (e.g. Innstrand *et al.*, 2008, Carlson *et al.*, 2006). Additionally, compared with men, women often report greater interference from work to family (Duxbury *et al.*, 1995), and tend to spend more hours engaged in family and child caring activities (OECD, 2011). This paper focuses on two specific work-family interference components: work-to-family conflict (WFC) and work- to-

family enrichment (WFE).

Work-to-Family Conflict and Burnout

Work-family conflict broadly refers to a form of inter role conflict, and unlike work-life conflict which refers to incompatibility between work and any component of an individual's personal life, WFC occurs when role pressures from work are incompatible with those in the family domain only (Greenhaus and Beutell, 1985). WFC is bi-directional, that is the demands of work can interfere with family (WFC) and family can interfere with work (work-to-family conflict) (Netemeyer, *et al.*, 1996). This paper focuses specifically on work-to-family conflict (WFC), which is an important issue for sole and partnered working mothers. It can contribute to poor health and well-being, and also make it difficult to enter the workforce and remain in employment (Ciabattari, 2007). Past studies show that WFC is a significant predictor of burnout (Greenhaus *et al.*, 2006). According to the COR theory, interrole conflict such as WFC leads to resource loss, as resources are lost in the process of meeting demands from both work and family roles (Grandey and Cropanzano, 1999). Should WFC continue over time, without resource replenishment, these losses increase the likelihood of burnout (Hobfoll and Shirom, 2001; Grandey and Cropanzano, 1999). For instance, a mother who finds it difficult to attend a child's school performance on a regular basis may experience anxiety and conflict; in an attempt to compensate they may invest greater energy and time at home. This could lead to further resource losses and WFC, and subsequently higher levels of burnout (Hobfoll and Shirom, 2001). Thus, the following hypothesis is proposed:

H2. Higher WFC will be associated with higher levels of personal and work burnout in working mothers.

Consistent with the COR theory, it is also feasible that the association between WFC and burnout differs in sole and partnered mothers. This proposition is based on the premise that sole mothers have lower resource levels, such as income, social support and poorer health, compared with partnered mothers. Lower resource levels may promote greater inter role conflict (reflected by higher WFC) in sole mothers relative to partnered mothers. This could occur because access to fewer resources hampers the ability of sole mothers to manage the negative influence of WFC. This may therefore mean that sole mothers are more susceptible to the negative effects of WFC compared with partnered mothers. The potential differences in associations between WFC and personal and work burnout in mothers is concerning as WFC in sole mothers can make it difficult to enter the workforce and remain in employment (Ciabattari, 2007). Work discontinuity is often seen as a potential barrier to career advancement (Metz, 2005). Hence, we propose the following hypothesis.

H3. The positive association between WFC and work burnout, and WFC and personal burnout, will be moderated by family type. In particular, the nature of the positive association will be more pronounced in sole mothers compared with partnered mothers.

Work-to-Family Enrichment and Burnout

Work-family enrichment occurs when work-related resource gains improve the quality of life and functioning in the home domain and vice-versa (Carlson *et al.*, 2006). Similar to WFC, WFE is bi-directional. In the present paper, we focus specifically on work-to-family enrichment (WFE). The Resource Gains Development (RGD) (Wayne *et al.*, 2007) model provides a framework for understanding enrichment processes. The main proposition of the RGD theory is that individuals are driven to grow, develop and achieve as much as possible in order to benefit themselves and any system they are part of, such as family or organizations (Wayne *et al.*, 2007). Enrichment occurs when the gains from one domain (e.g. work) are applied, maintained or endorsed in another (e.g. family). There are two key facilitators of this process: 1) personal characteristics, such as positive affect, and 2) environmental resources such as objects, conditions, energy and support. In the work domain, personal characteristics can be facilitated through opportunities for professional development and job prestige, whilst environmental resources can include support from co-workers and salary (Wayne *et al.*, 2007).

WFE is associated with positive health and organizational outcomes, such as improved physical and mental health, job satisfaction, and lower turnover intentions (McNall *et al.*, 2010, Magee *et al.*, 2012). However, while several studies have demonstrated a link between WFC and burnout (Allen *et al.*, 2000, Burke *et al.*, 1996), comparatively few have examined whether WFE is related to burnout (e.g. Innstrand *et al.*, 2008). In a longitudinal study by Innstrand *et al.* (2008) work-to-family facilitation (a similar construct to WFE, where involvement in work positively influences functioning at home) was inversely associated with burnout. Thus, a relationship between WFE and personal burnout, and WFE and work burnout, is plausible within the context of the COR, and in particular the corollary that resource gains beget further gains (Hobfoll and Shirom, 2001). For instance, an individual with health resources is better able to take advantage of professional development opportunities, which in turn leads to further gains and organizational benefits (Hakanen *et al.*, 2011). WFE also improves performance and affect in the family role (Carlson *et al.*, 2006). Therefore, we expect that mothers with high resource levels will be better positioned to gain further resources, as reflected by higher WFE levels, which will lead to lower work and personal burnout levels.

H4. Greater WFE will be associated with lower work and personal burnout in working mothers.

These associations may vary between sole and partnered mothers. It is plausible that partnered mothers have greater resource reservoirs compared to sole mothers. Both COR and RGD theories propose that individuals with higher resources have greater potential for resource accumulation than those with low resources (Hobfoll and Shirom, 2001, Wayne *et al.*, 2007). Therefore, when partnered mothers experience a work-related gain, such as acquiring a new skill or promotion, the impact on burnout will be greater than for sole mothers who have lower resource levels. Consequently, it is expected that the inverse association between WFE and burnout (both personal and work) will differ between sole and partnered mothers, with a stronger relationship for partnered mothers.

H5. The inverse relationship between WFE and work burnout, and WFE and personal burnout, will be stronger for partnered than sole mothers.

Control Variables

In examining the study hypotheses, we controlled for a range of covariates that could affect these associations. There is evidence that individual- and family and work-related variables (e.g. Nicklin and McNall, 2011; Grzywacz and Marks, 2000) are related to the work-to-family interface (i.e., WFC and WFE). For instance, WFC and burnout have been found to be inversely related to education, age of youngest child and income (Dziak *et al.*, 2010, Grzywacz and Marks 2000) and positively related work hours (Soares *et al.*, 2007). WFE has been found to be positively associated with education and income, and negatively associated with the number of children, and age (Nicklin and McNall 2011).

4.3 Method

Data were collected by online self-report surveys at two time points, six months apart. Methods were employed to collect data from respondents, including email, social media and online parenting forums. Emails were sent via authors' contacts that were then asked to refer on the email to others who possess the required characteristics. In this instance, respondents needed to be in paid employment with a dependent child. Finally, permission was sought from online parenting forum administrators to post information about the study with a link to the survey and further information.

Participants

The first wave of data collection resulted in 1132 Australian respondents (225 sole and 907 partnered). The second wave resulted in 644 respondents, and following coding, matching and data cleaning the final sample of working mothers was 623, which included 107 (17 percent) sole and 516 (83 percent) partnered matched respondents. Working mothers were defined as women engaged in paid employment (full-time or part-time) and

with parental responsibility for a child less than 18 years of age. Partnered mothers were classified as those in a couple relationship cohabitating together, and sole mothers as those who were not in a relationship cohabitating together.

The mean age was 39.6 years (SD = 6.91 years), and the majority were tertiary educated (65 percent). The mean number of children in families was 1.99 (.85), and the mean age of the youngest child was 6.98 years. The sample had a large proportion of tertiary qualified women (65 percent) which is higher than the national Australian rate of 25 percent (ABS, 2014), which may be a consequence of the recruitment method. This research has approval from the University's Human Research Ethics Committee.

Measures

Burnout. Burnout was measured using two subscales of the Copenhagen Burnout Inventory (CBI): personal burnout and work-related burnout (Kristensen *et al.*, 2005). The personal burnout sub-dimension is a generic scale of burnout; the work-related sub-dimension assumes that the respondent is engaged in paid employment (Kristensen *et al.*, 2005). Each sub-dimension has six items with responses on a 5-point Likert scale ranging from (1) "never/almost never" to (5) "always". Construct reliability was measured using two approaches. Firstly, Hancock (2001) coefficient H, which is "the squared correlation between the latent construct and the optimum linear composite formed from the measured indicators". Construct reliability was assessed against a .80 guideline (Hancock, 2001). The coefficient H was considered adequate for both personal burnout (Coefficient H=.93), and work burnout (Coefficient H=.98). Secondly, Cronbach's alpha showed sufficient reliability for personal burnout (α =.99), and work burnout (α =.98).

Work-family conflict. WFC was measured using Netemeyer *et al.*'s (1996) five- item scale with responses on a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree". An example item is: 'The amount of time my job takes up makes it difficult to fulfil family responsibilities' (Coefficient H=.94, Cronbach's alpha = .89).

Work-family enrichment. Carlson *et al.*'s (2006) nine items were used to measure WFE, with three items each measuring the three subscale WFE Development (e.g. 'My involvement in work helps me acquire skills and this helps me be a better family member'); WFE Capital (e.g. "my involvement in my work provides me with a sense of accomplishment and this helps me be a better family member"); and WFE Affect (e.g. 'My involvement in work makes me feel happy and this helps me be a better family member'). Responses are on a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree" (Coefficient H=.89, Cronbach's alpha = .93).

Statistical Analysis

Comparisons of individual, work-related and family-related variables between sole and partnered mothers were examined using t-tests and chi-squared tests conducted with SPSS (IBM, 2010). Hypotheses 2 to 5 were tested with hierarchical regression analyses with personal burnout and work burnout at time 2 as an independent variable. In each of the four models, step 1 represents the base model estimates, including the control variables: age, age of youngest child, number of children, income, education, burnout at time 1 and work hours. Marital status was added at Step 2. The work-family interface variables (WFC and WFE) were added at Step 3, providing the test of Hypothesis 2 and 4 respectively. The interaction terms – either WFC x marital status or WFE x marital status – were then introduced at Step 4. At each step, the significance of change in squared multiple correlation was assessed. In order to minimize the influence of multicollinearity among the interactions and main effects, variables were centered prior to analysis (Aiken and West, 1991). Any significant interactions were then evaluated using simple slopes analysis (Aiken and West, 1991) in PROCESS for SPSS (Hayes, 2013).

4.4 Results

Sample characteristics

Table 4.1 displays the descriptive characteristics of the sample as well as chi-square analysis results of differences between sole and partnered mothers. Approximately half (53 percent) of the sole mothers and 73 percent of partnered mothers had tertiary qualifications, and this difference was significant. Annual household income also differed significantly with the majority (74 percent) of sole mothers having an income less than \$80,000, whereas the majority (60 percent) of partnered mothers had an income of more than \$120,000.

Paired-sample t-tests show that sole mothers worked significantly longer hours than partnered mothers (Table 4.1). Sole mothers were also significantly older than partnered mothers. Partnered mothers had more children than sole mothers, and the age of partnered mothers' youngest child was significantly younger than those of sole mothers.

Paired sample t-tests were also conducted to compare means between sole and partnered mothers for personal and work burnout and work-family enrichment and work-family conflict. Personal and work burnout did not differ between groups of mothers, thus *H1* was not supported. There were no other significant differences between the two groups at $p < .001$, however work-family conflict was significantly different at $p < .01$.

Table 4.1 Sample characteristics and chi-square analysis of differences between sole and partnered mothers

	Sole (n=107)		Partnered (n=516)		χ^2	p
	n	%	n	%		
Ethnicity					.036	.55
Australian	91	85	450	87		
Other	16	15	66	13		
Education					16.45	<.001
Non-tertiary	50	47	139	27		
Tertiary	57	53	377	73		
Income					205.80	<.001
Less than \$80K	79	74	60	12		
\$81K to \$120K	21	20	149	29		
More than \$120K	7	7	307	60		
	m	SD	m	SD	t	p
Number of children	1.96	.89	2.02	.81	-0.78	0.44
Age of youngest child	8.87	4.77	5.08	4.73	7.53	<.001
Mother's age	41.40	7.30	37.83	6.52	5.05	<.001
Years in current role	5.21	5.26	5.69	5.01	-7.73	0.46
Work hours	33.07	11.54	30.91	10.85	1.85	0.06
Work family enrichment	3.48	.82	3.28	.87	-1.33	0.18
Work family conflict	3.44	.90	3.28	.87	1.82	0.07
Personal burnout at time 2	53.66	17.93	50.83	18.76	1.40	0.16
Work burnout at time 2	47.24	17.61	45.69	18.60	.768	0.44

WFC and burnout (work and personal)

The standardized regression coefficients of the hierarchical regression analysis are in Table 4.2. The first model tested associations between WFC and work burnout. The control variables accounted for a significant amount of variance ($\Delta R^2 = .38$, $p < .001$; total adjusted $R^2 = .37$, $F(7, 587) = 51.54$, $p < .001$). At Step 2, marital status was entered, and was not significant ($\Delta R^2 = .38$, $p = .54$; total adjusted $R^2 = .37$; $F(8, 586) = 45.10$, $p < .001$; Marital: $\beta = .03$, ns). At Step 3, WFC was entered, and accounted for a unique variance ($\Delta R^2 = .04$, $p < .001$; total adjusted $R^2 = .41$; $F(9, 585) = 47.35$, $p < .001$, WFC: $\beta = .26$, $p = .001$). The WFC x Marital status interaction terms did not add significant variance.

The second model tested associations between WFC and personal burnout. The control variables accounted for a significant amount of variance ($\Delta R^2 = .51$, $p < .001$; total adjusted $R^2 = .51$, $F(7, 587) = 87.57$, $p < .001$). At Step 2, marital status was entered, and was not significant ($\Delta R^2 = .00$, ns; total adjusted $R^2 = .51$; $F(8, 586) = 76.61$, $p < .001$). At Step 3, WFC was entered and was significant ($\Delta R^2 = .01$, $p < .001$; total adjusted $R^2 = .52$, $F(9, 585) = 71.04$, $p < .001$; WFC: $\beta = .13$, $p < .001$). At Step 4, the WFC x Marital status interaction term did not add significant variance. Therefore $H2$ was supported, and $H3$ was not supported.

Table 4.2 Hierarchical regression analysis coefficient betas for the work-family interface and burnout – a. work-family conflict; b. work-family enrichment

Variables	Personal burnout time 2				Work burnout time 2			
a. Work-family conflict	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Step 1: Control variables								
Number of children	.01	.01	.00	.00	.07*	.07*	.04	.04
Age of youngest child	-.04	-.05	-.04	-.04	-.05	-.05	-.02	-.02
Age	.00	-.00	-.02	-.02	.04	.04	.01	.01
Education	-.02	-.02	-.03	-.03	.03	.03	.02	.02
Income	-.06	-.04	-.04	-.05	-.09*	-.10*	-.08*	-.08*
Work hours	.01	.01	-.03	-.03	.05	.05	-.02	-.02
Personal burnout time 1	.70***	.70***	.64***	.64***				
Work burnout time 1	-	-	-	-	.60***	.60***	.48***	.48***
Step 2: Marital		-.02	-.02	-.02		.03	.03	.03
Step 3: WFC			.13***	.07			.26***	.19*
Step 4: WFC x marital				.07				.08
Change R2	.51	.00	.01	.00	.38	.00	.04	.00
Total adjusted R2	.51	.51	.52	.52	.37	.37	.41	.41

Note: The standardised regression coefficients are presented. * $p < .05$. ** $p < .01$. *** $p < .001$.

Variables	Personal burnout time 2				Work burnout time 2			
<i>b. Work-family enrichment</i>	Step 1	Step 2	Step 3	Step 4	Step 1	Step 2	Step 3	Step 4
Step 1: Control variables								
Number of children	.01	.01	.02	.02	.08*	.08*	.08*	.07*
Age of youngest child	-.04	-.05	-.05	-.06	-.05	-.05	-.05	-.05
Age	.00	.00	-.01	-.02	.04	.04	.02	.02
Education	-.02	-.02	-.01	-.01	.03	.03	.05	.05
Income	-.06	-.04	-.04	-.04	-.10*	-.10*	-.08	-.08
Work hours	.01	.01	.01	.01	.05	.05	.06	.06
Personal burnout time 1	.70***	.70***	.67***	.67***				
Work burnout time 1					.60***	.60***	.52***	.52***
Step 2: Marital		-.02	-.03	-.03		.03	.01	.01
Step 3: WFE			.11***	.11***			.19***	.19***
Step 4: WFE x Marital				-.07*				-.03
Change in R2	.51	.00	.01	.01	.38	.00	.03	.00
Total adjusted R2	.51	.51	.51	.52	.37	.37	.40	.40

Note: The standardised regression coefficients are presented. * $p < .05$. ** $p < .01$. *** $p < .001$.

WFE and burnout (work and personal)

The third model tested associations between WFE and work burnout. As shown in Table 4.2, the control variables accounted for a significant amount of variance ($\Delta R^2=.37$, $p<.001$; total adjusted $R^2=.37$, $F(7,587)=51.54$, $p<.001$). Marital status was entered at Step 2, and did not account for significant variance ($\Delta R^2=.00$, ns ; total adjusted $R^2=.37$; $F(8,586)=45.10$, $p<.001$). At Step 3, WFE was entered and accounted for a unique variance ($\Delta R^2=.03$, $p<.001$; total adjusted $R^2=.40$, $F(8,585)=45.12$, $p<.001$; WFE: $\beta = -.19$, $p=.001$). The cross-product terms were entered at Step 4, and WFE x Marital status did not account for significant incremental variance.

The final model tested associations between WFE and personal burnout. Again the control variables accounted for a significant amount of variance ($\Delta R^2=.51$, $p<.001$; total adjusted $R^2=.51$; $F(7,587)=87.58$, $p<.001$). At Step 2, marital status was entered and was not significant ($\Delta R^2=.00$, ns ; total adjusted $R^2=.51$; $F(8,586)=76.61$, $p<.001$). WFE was entered at Step 3 and accounted for a unique variance ($\Delta R^2=.01$, $p<.001$; total adjusted $R^2=.51$, $F(9,585)=70.62$, $p<.001$; WFE: $\beta = -.11$, $p=.001$). The cross-product terms were entered at Step 4, and WFE x Marital status accounted for significant variance in PB ($\Delta R^2=.01$, $p=.015$; total adjusted $R^2=.52$; $F(10,584)=65.69$, $p<.001$; WFE x marital status: $\beta = -.07$, $p=.015$). Therefore, $H4$ was supported and $H5$ partially supported, as the interaction was significant for personal, but not for work burnout.

To further investigate the interaction effect, the simple slopes for sole mothers and partnered mothers were estimated (Figure 4.1). The analyses indicated a significant negative association between WFE and personal burnout for partnered mothers ($b=-3.20$, $p<.001$). However, for sole mothers, the association was not significant ($b=1.09$, $p=.50$).

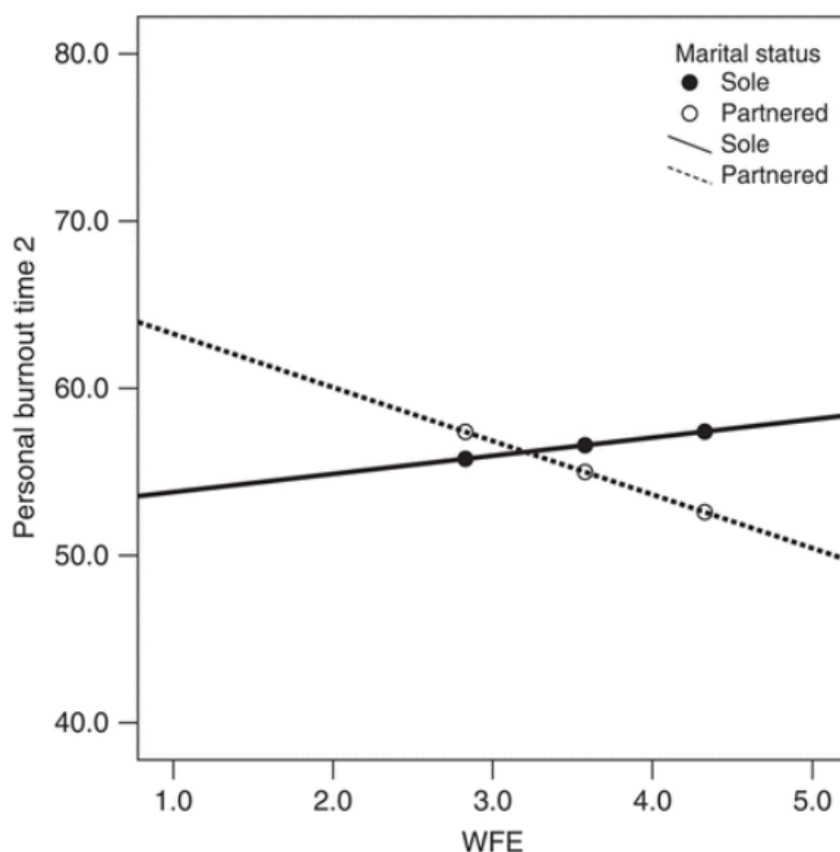


Figure 4.1 The interaction effect of marital status on the relationship between WFE and personal burnout at time 2

4.5 Discussion

This two-wave study compares burnout between sole and partnered mothers; explores relationships between WFC and burnout, and WFE and burnout; and tests whether these relationships differ between sole and partnered mothers. The current study addresses gaps in the literature, including a lack of research on burnout in working mothers and on work-family experiences across diverse family types. Finally this study builds on limited research on the nature of the relationship between WFE and burnout. Our findings show no differences in burnout levels between sole and partnered mothers, suggesting that when available resources are similar differences in wellbeing between mothers may disappear. In addition, high WFC was associated with high personal and work burnout, and high WFE was associated low personal burnout and work burnout. Finally, the inverse relationship between WFE and personal burnout was stronger for partnered than sole working mothers, suggesting that the benefits of an enriching work environment are greater for partnered working mothers.

Although unexpected, the lack of significant differences between mothers in regards

to burnout (work and personal) and WFC, and the moderating role of marital status on this relationship, can be explained within the context of COR Theory. For example, COR theory posits that enduring resource loss, could have a greater impact than having few resources (Hobfoll, 2001). Thus, even with low resource reservoirs, individuals can minimize resource loss (Hobfoll *et al.*, 2003). For instance, sole mothers, although having a lower household income may manage finances carefully to avoid further loss of income, or gain further education to raise their potential for promotion and also job stability. These activities may build resilience and guard against personal and work burnout and WFC. This proposition has received some support in previous research (Ennis, *et al.*, 2000); for example, vulnerable inner-city women have been found to employ strategies to minimize resource loss and create a life niche that is supportive. Another possible explanation is that the present sample of working mothers was highly educated and thus not representative of the general population. Education is an important indicator of socioeconomic status, and is an important personal resource. It is plausible that higher education levels offset the differences between sole and partnered mothers that would be observed in a more representative sample; this requires further investigation in future research.

We also found that WFE was associated with lower levels of personal and work burnout. These results are consistent with past studies, and with the corollary of COR stating that individuals with high resource levels are better positioned to gain further resources. Finally, the relationship between WFE and personal burnout was more pronounced in partnered than sole mothers; however, no significant results were observed for work burnout. The stronger relationship between WFE and personal burnout could be attributed to greater buffering effects from enrichment in partnered mothers compared to sole mothers. Greater buffering in partnered mothers occurs because of higher resource levels, particularly in the family domain, with access to spousal support, intimacy and sharing childcare and household responsibilities with a partner or spouse.

Contrary to expectations, the interaction of marital status on the relationship between WFE and burnout was significant for personal burnout only but not work burnout. This finding may be due to sole mothers having substantially fewer parenting/personal resources, whilst still coping with full-time parenting responsibilities. Whereas, in the work domain, resources differences between the two groups may be less pronounced, resulting in differences for personal but not work burnout.

Contributions and implications

This study supports the role of COR theory as an explanatory mechanism for understanding the relationships between burnout and the work-family interface in working mothers. This research extends our knowledge on the relationships between work-family

variables and burnout in an understudied sample of the working population, working mothers. It is the first study to compare the relationships between WFC and burnout, and WFE and burnout between mothers from different family structures. Further, the present study contributes to the literature by showing that enrichment may have a greater impact on burnout for partnered than sole mothers. Thus careers facilitating resource gains, such as progression and development opportunities, may assist in preventing burnout, particularly for partnered mothers. Whilst, these gains also benefit sole mothers, more studies are needed to determine other relevant factors including resources like social support and job autonomy, that impact on their burnout.

An important practical implication from this study is that enrichment may protect mothers to some extent from experiencing burnout. This buffering effect suggests that adopting strategies and workplace practices fostering enrichment, such as professional development, job autonomy, and social support should be included in workplaces. However, the present results also suggest that these benefits may not be as strong for sole mothers, who have a particularly stressful role in combining work and family (Cheeseman *et al.*, 2011). This is especially concerning as WFC plays a role in keeping sole mothers out of the workforce and also in attaining stable employment (Ciabattari, 2007). Those in unstable employment are less likely to enjoy career development and progression opportunities and thus remain in disadvantageous occupational positions, which can compound the difficulties of combining work and family and inhibit resource gains and WFE. Consequently, additional strategies need to be offered to sole mothers to manage the work-family interface.

As suggested by other researchers (e.g., McNall *et al.*, 2010) further studies examining relationships between WFE and burnout, rather than just WFC and burnout are needed. Finally, there is a need for ongoing research into the health and work-family experiences of parents in diverse family structures. In particular, given the finding that burnout does not differ between sole and partnered mothers, future studies should explore differences in burnout between working mothers and working fathers, both sole and partnered as well as the role of the work-family interface. Further research may inform strategies to facilitate mothers in the workforce and utilize the talents of all members of the workforce, regardless of family factors.

Strengths and limitations

There are some limitations associated with this study. First, we used self-report measures; therefore, there is possible response and recall bias. Second, due to the sampling method the mothers in our sample were more highly educated than the general population and this limits generalizability. Despite this, the results are likely to be similar in a sample of women with more variability across education as our study included education as

a covariate. However, future studies might include a more diverse sample in regards to education levels. Using two-waves of data in this study is superior to cross-sectional approach because of the self-matched design allow for control of time-stable confounders that are common in observational studies (Shahar, 2009). Furthermore, a two-wave design provides better insight into the causal relationships between study variables than a cross-sectional design. Further research with a minimum of three time points is recommended to fully explore causal relationship between study variables (Taris & Kompier, 2003).

4.6 Conclusion

This study shows there are few differences between sole working mothers and partnered working mothers in personal and work-related burnout. High conflict levels were associated with high burnout levels in mothers, and enrichment levels were associated with low burnout levels. Therefore, adopting strategies to facilitate enrichment may be a worthwhile approach to managing burnout in organizations. The benefits of such a strategy are two-fold as the positive outcomes of enrichment extend beyond mothers, also benefitting organizations through improved productivity, satisfaction and health. Importantly, this study suggests that the buffering effects of enrichment may be greater in partnered mothers. Therefore, sole mothers may not benefit from the protective nature of WFE to the same extent as partnered mothers, which could make them more vulnerable to burnout, and potentially inhibit career progression. Further research on sole working mothers is needed, thus reflecting the increasing diversity of family forms in many societies.

4.7 References

- ABS. (2008), "Mother's Day Facts and Figures, Canberra", Australian Bureau of Statistics.
- ABS. (2011), "Family Characteristics, Australia, 2009-10", Canberra, Australian Bureau of Statistics.
- ABS. (2014), "Gender Indicators, Australia, August 2014", Canberra, Australian Bureau of Statistics.
- Afifi, T., Cox, B. and Enns, W. (2006), "Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample", *Soc Psychiatry Psychiatr Epidemiol*, Vol. 41, pp. 122-129.
- Allen, T., Herst, D. E., Bruck, C. S. and Sutton, M. (2000), "Consequences associated with work-to-family conflict: a review and agenda for future research", *Journal of Occupational Health Psychology*, Vol. 5 No. 2, pp. 278- 308.
- Baxter, J. and Renda, J. (2011), "Lone and couple mothers in the Australian labour market: Differences in employment transitions", *Australian Journal of Labour Economics*, Vol. 14 No. 2, pp. 102-122.
- Burke, R. J., Greenglass, E. R. and Schwarzer, R. (1996), "Predicting teacher burnout over time: effects of work stress, social support, and self-doubts on burnout and its consequences", *Anxiety, Stress, and Coping: An International Journal*, Vol. 9 No. 3, pp. 261-275.
- Carlson, D. S., Kacmar, K. M., Wayne, J. H. and Grzywacz, J. G. (2006), "Measuring the positive side of work-family interface: Development and validation of a work-family enrichment scale", *Journal of Vocational Behavior*, Vol. 68.
- Cheeseman, S., Ferguson, C. and Cohen, L. (2011), "The experience of single mothers: Community and other external influences relating to resilience", *The Australian Community Psychologist*, Vol. 23 No. 2, pp. 32-49.
- Ciabattari, T. (2007), "Single mothers, social capital, and work-family conflict", *Journal of Family Issues*, Vol. 28, pp. 34-60.
- Cohen, P. N. (2013), "Marriage is declining globally: Can you say that?", *Family Inequality*, Maryland.
- Duxbury, L., Higgins, C. and Lee, C. (1995), "Work-family conflict: A comparison by gender, family types, and perceived control", *Journal of Family Studies*, Vol. 15, p. 449.
- Dziak, E., Janzen, B.L. and Muhaarine, N. (2010), "Inequalities in the psychological well-being of employed single and partnered mothers: the role of psychosocial work quality and work-family conflict", *International Journal for Equity in Health*, Vol. 9, No. 6.
- Ennis, N. E., Hobfoll, S. E., and Schroder, K. E. E. (2000), "Money doesn't talk, it swears:

- How economic stress and resistance resources impact inner-city women's depressive mood", *American Journal of Community Psychology*, Vol. 28, pp. 149-173.
- Grandey, A. and Cropanzano, R. (1999), "The Conservation of Resources Model applied to work-family conflict and strain", *Journal of Vocational Behaviour*, Vol. 54, pp. 350-370.
- Greenhaus, J. H., Allen, T. and Spector, P. E. (2006), "Health consequences of work-family conflict: the dark side of the work-family interface", *Research in Occupational Stress and Well Being*, Vol. 5, pp. 61-98.
- Greenhaus, J. H. and Beutell, N. J. (1985), "Sources of conflict between work and family roles", *The Academy of Management Review*, Vol. 10 No. 1, pp. 76- 88.
- Grzywacz, J.G. and Marks, N.F. (2000), "Reconceptualising the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family", *Journal of Occupational Health Psychology*, Vol. 5, pp. 111-126.
- Hakanen, J. J., Peeters, M. C. W. and Perhoniemi, R. (2011), "Enrichment processes and gain spirals at work and at home: A 3-year cross-lagged panel study", *Journal of Occupational and Organisational Psychology*, Vol. 84, pp. 8-30.
- Hancock, G. R. (2001), "Effect size, power, and the same size determination for structured means modeling and mimic approaches to between-groups hypothesis testing of means on a single latent construct", *Psychometrika*, Vol. 66 No. 3, pp. 373-388.
- Hayes, A.F. (2013), "Introduction to mediation, moderation, and conditional process analysis. A regression-based approach", The Guilford Press, New York London.
- Hobfoll, S. E. (2001), "The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory", *Applied Psychology: An International Review*, Vol. 50 No. 3, pp. 337-421.
- Hobfoll, S. E., Johnson, D. C., Ennis, N. and Jackson, A. P. (2003), "Resource loss, resource gain and emotional outcomes among inner city women", *Journal of Personality and Social Psychology*, Vol. 84 No. 3, pp. 632-643.
- Hobfoll, S. E. and Shirom, A. (Eds.) (2001), "Conservation of resource theory: Applications to stress and management in the workplace", Dekker, New York.
- IBM (2010), IBM SPSS Statistics 19.0.
- Innstrand, S. T., Melbye Langbelle, E., Arild Espnes, G. and Gjerlow Aasland, O. (2008), "Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations", *Work & Stress*, Vol. 22 No. 1, pp. 1-15.
- Kristensen, T. S., Borritz, M., Villadsen, E. and Christensen, K. B. (2005), "The Copenhagen Burnout Inventory: a new tool for the assessment of burnout", *Work & Stress*, Vol. 19 No. 3, pp. 192-207.

- Magee, C. A., Stefanic, N., Caputi, P. and Iverson, D. C. (2012), "The association between job demand/control and health in employed parents: The mediating role of work-to-family interference and enhancement", *Journal of Occupational Health Psychology*, Vol. 17 No. 2, pp. 196-205.
- Mannis, V.S. (1999), "Single mothers by choice", *Family Relations*, Vol. 48, pp. 121–128.
- Maslach, C., Schaufeli, W. B. and Leiter, M. P. (2001), "Job burnout", *Annual Review of Psychology*, Vol. 52, pp. 397-422.
- Metz, I. (2005), 'Advancing the careers of women with children', *Career Development International*, Vol. 10, No. 3, pp. 228-245.
- McNall, L. A., Nicklin, J. M. and Masuda, A. D. (2010), "A meta-analytic review of the consequences associated with work-family enrichment", *Journal of Business Psychology*, Vol. 25, pp. 381-396.
- Netemyer, R. G., Boles, J. and McMurrian, R. (1996), "Development and validation of work-family conflict and family-work conflict scales", *Journal of Applied Psychology*, Vol. 81 No. 4, pp. 400-410.
- Nicklin, J.M. and McNall, L.A. (2011), 'Work-family enrichment, support and satisfaction: A test of mediation', *European Journal of Work and Organizational Psychology*, Vol. 22 No. 1, pp 67-77.
- Nomaguchi, K. M. (2012), "Marital status, gender and home-to-job conflict among employed parents", *Journal Family Issues*, Vol. 33 No. 3, pp. 271-294.
- OECD (2011), Families are changing. Doing Better for Families.
- Peeters, M. C. W., Montgomery, A. J., Bakker, A. B. and Schaufeli, W. B. (2005), "Balancing work and home: how job and home demands are related to burnout", *International Journal of Stress Management*, Vol. 12 No. 1, pp. 43-61.
- Schaufeli, W. B., Leiter, M. P. and Maslach, C. (2009), "Burnout: 35 years of research and practice", *Career Development International*, Vol. 14 No. 3.
- Shahar, E. (2009) "Evaluating the effect of change on change: a different viewpoint." *Journal of Evaluation in Clinical Practice*, Vol. 15, pp. 204–207.
- Soares, .J.J.F., Grossi, G. and Sundin, O. (2007), 'Burnout among women: associations with demographic/socio-economic, work, life-style and health factors', *Archival Womens Mental Health*, Vol. 10, pp. 61-71.
- Taris, T., & Kompier, M. (2003). "Challenges of longitudinal designs in occupational health psychology". *Scandinavian Journal of Work, Environment, and Health*, Vol. 29, pp. 1–4.
- Wayne, J. H., Grzywacz, J. G., Carlson, D. S. and Kacmar, K. M. (2007), "Work- family facilitation: A theoretical explanation and model of primary antecedents and consequences", *Human Resource Management Review*, Vol. 17, pp. 63-76.

CHAPTER 5: LOCUS OF CONTROL, WORK-FAMILY CONFLICT AND WORK-FAMILY ENRICHMENT. A RESOURCE-BASED COMPARISON OF SOLE AND PARTNERED MOTHERS

Robinson, L.D., Magee, C.A., & Caputi P. (Submitted). Locus of control, work-family conflict and work-family enrichment. A resource-based comparison of sole and partnered mothers, *Personality and Individual Differences*.

LOCUS OF CONTROL, WORK-FAMILY CONFLICT AND WORK-FAMILY ENRICHMENT. A RESOURCE-BASED COMPARISON OF SOLE AND PARTNERED MOTHERS

5.1 Abstract

Individual differences are one of a number of factors that have the potential to influence the interface between work and family. For instance, some studies have indicated that locus of control is related to work-family conflict (WFC) and work-family enrichment (WFE). An internal locus of control (or internality) is commonly linked with taking initiative and proactive problem solving, and is considered a key personal resource. In this paper, we investigated whether internality was associated with WFC and WFE in a sample of 573 working mothers (477 partnered and 96 sole) over two-time points. It was hypothesised that internality would predict WFC and WFE, and that these relationships would differ between sole and partnered mothers. Results showed that internality did not predict WFC or WFE in the total sample, nor did the relationship between internality and WFC differ between sole and partnered mothers. However, the relationship between internality and the three subscales WFE subscales – Development, Capital and Affect – differed significantly between sole and partnered mothers. Internality had a greater influence on WFE for sole than partnered mothers. This study indicates that internality may be advantageous for sole mothers, and in contrast, having low internality may have poor implications for wellbeing in sole mothers, who have a greater risk of disadvantage than partnered mothers.

5.2 Introduction

Work and family are two key areas in life for many working mothers, and managing the often-competing demands of these domains remains a substantial challenge. The work-family interface has received considerable attention in recent decades, with many studies investigating the extent to which experiences at work negatively influence non-working or family life (often referred to as work-family conflict (WFC) (Netemeyer, Boles & McMurrian, 1996). However, experiences at work can have a positive influence (e.g., generation of skills, social support, and income) and promote benefits for individuals and their families; this is often referred to as work-family enrichment (WFE) (Carlson, Kacmar, Wayne & Grzywacz, 2006). Given the importance of WFC and WFE, and their implications for health, family functioning, and workplace performance (Allen, Herst, Bruck, & Sutton, 2000; Crain & Hammer, 2015; Innstrand, Langbelle, Espnes, & Aasland, 2008; McNall, Nicklin, & Masuda, 2010), there has been considerable research investigating the potential antecedents of work-family experiences such as job autonomy, work social support, family stressors and involvement, and time demands (Crain & Hammer, 2015; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). Individual difference factors may also be important antecedents of WFC and WFE (Andreassi & Thompson, 2007). For instance, some studies have found that trait emotional stability (Biggart, Corr, O'Brien, & Cooper, 2010) and extraversion are associated with low WFC and high WFE (Wayne, Musisca, & Fleeson, 2004). Other studies have found that internal locus of control (referred to as "internality" in the remainder of this paper) may also have important implications for WFC and WFE (e.g., Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011). Given that individuals may be predisposed to positive and negative work-family experiences (Cho, Tay, Allen, & Stark, 2013) and scholars argue that individual differences influence how individuals perceive and react to the work-family interface of work and family, studying the role of dispositions is paramount in the work-family literature (Wayne, Michel, & Matthews, 2016). This paper aimed to build upon existing research investigating whether internality is a predictor of WFC and WFE in a sample of working mothers. Furthermore, we investigated whether the associations of internality with WFC and WFE differ between sole working mothers and partnered working mothers.

Locus of control (LOC) is an important individual difference that influences how individuals deal with a range of stressful life events. For instance, LOC is related to post-traumatic stress disorder (Solomon, Mikulincer & Avitzur, 1988) and personal growth following trauma (Maercker & Herrie, 2003). Individuals with low internality attribute rewards or life outcomes to forces outside of themselves (Chen & Wang, 2007; Cheng, 1994). In contrast, individuals with high internality believe that outcomes in life are controlled by their own actions (Chen & Wang, 2007; Cheng, 1994). Internality predicts many positive

outcomes including improved health and greater life satisfaction (Chen & Wang, 2007; Cheng, 1994).

Past studies have shown internality also influences the work-family interface (Spector, 1988). For example, internality is inversely related with WFC (Hobfoll, 1989; Ito & Brotheridge, 2003; Johnson, Batey, & Holdsworth, 2009). This is perhaps because internals adopt task-oriented coping behaviours and take a proactive approach to problems created by stressful events (Spector, 1988). As a result, they may be less likely to experience high levels of WFC. Data examining a relationship between internality and WFE are scarce, although a positive relationship has been reported between internality and positive spillover from work to family, which is a construct similar to WFE (Andreassi & Thompson, 2007). Because internals innately seek opportunities to develop skills and gain resources, it is plausible that they experience higher levels of WFE.

The relationships between internality and WFC/WFE can be understood using the Conservation of Resources (COR) theory (Hobfoll, 1989). According to COR theory individuals experience stress following loss, threat of loss, or insufficient return on investment of resources (Hobfoll, 1989). Resources, such as good health, money, and social support are key assets that underlie the processes of WFC and WFE because they influence the capacity to meet multiple demands. COR theory states that individuals with higher resource levels have greater potential for further gains, whilst those with few resources are more vulnerable to loss (Hobfoll, 2001). Individual difference factors such as internality reflect an important personal resource because they can help people cope with stressful or demanding situations (Hoffi-Hofstetter & Mannheim, 1999; Ng & Feldman, 2011). For example, when faced with a challenge or demand (e.g., stressful work or family demands), internals are better able to cope, and are also motivated to gain additional resources which are instrumental in avoiding stressful events from transpiring (Ng & Feldman, 2011). This may explain why internality is inversely associated with WFC. Potentially there is also a positive relationship between internality and WFE because individuals higher in internality are more task-oriented and utilize more proactive coping strategies. Therefore, they are more likely to experience gains in resources such as a sense of purpose, time for work, status, acknowledgement of accomplishments and continuing skill development.

In the present study, we investigated the relationships between internality and work family experiences in a sample of working mothers. The work-family interface is of particular relevance for this population given the growing proportion of mothers in paid employment and also because mothers remain the primary caregivers to children even when in paid employment (Pew Research Centre, 2015). Moreover, research on the work-family interface of sole mothers has been scarce compared to partnered mothers even though sole mothers

do not have the support of a residential partner and often have fewer resources to meet demands of work and family. Consistent with some existing research (e.g., Ito & Brotheridge, 2003) we first hypothesise that there is a negative relationship between internality and WFC in working mothers. Second, we hypothesise that there will be a positive relationship between internality and WFE in working mothers

The second aim of this study is to examine whether the nature of the relationships of internality with WFC and WFE differs between sole mothers and partnered mothers. Being married or in a partnership is considered a valuable resource according to COR theory (Grandey & Cropanzano, 1999; Hobfoll, 1989), as those who are married or in a partnership may have more resources, such as money, time, spousal support and help with the children, to draw on compared to those who are not in a partnership. Greater access to resources may mean that partnered mothers experience less WFC compared with sole mothers. Further, the influence of internality on WFC may differ between sole and partnered mothers. This is because of the lower resources available to sole mothers compared to partnered mothers (e.g., lower incomes, lower social support, poorer health, and greater housing instability) (Afifi, Cox & Enns, 2006; Dziak, Janzen & Muhaarine, 2010; Hobfoll, 2001). Therefore, we propose that having low internality will have a greater impact on WFC for sole than it will for partnered mothers because sole mothers have a lower resource base than partnered mothers. This is in line with COR theory which states that low resources increases vulnerability to resource loss (Hobfoll, 1989). Therefore, our third hypothesis is that the inverse relationship between internality and WFC will be stronger for sole than partnered mothers.

The influence of internality on WFE likely differs in sole mothers from partnered mothers. This is because, from a COR perspective, resource gains increase in saliency in the context of loss (Hobfoll, 1989). That is, even though the effects of resource loss are greater than gains, resource gains become more salient following a major resource loss (Hobfoll, 2001). For example, a study of pregnant women reported that resource gains had a greater impact on psychological well-being in women who had experienced a resource loss compared to women who had not experienced a loss (Hobfoll, 1989; Wells, Hobfoll & Lavin, 1999). The majority of sole mothers have been through a relationship breakdown, separation or divorce, which are commonly accompanied by major resource losses (ABS, 2007). According to Hobfoll (1989) any subsequent gains then have greater saliency for sole mothers than for partnered mothers. Therefore, internality, a key resource, may influence WFE to a greater extent in sole mothers than partnered mothers. Thus, we hypothesise that the positive relationship between internality and WFE will be stronger for sole than partnered mothers.

5.3 Method

The present study consisted of an online self-report survey completed at two time points, six-months apart from Australian working mothers. The criteria included being engaged in paid employment and having a dependent child up to 18 years of age. Several methods were used to distribute a link to the survey, including the snowballing approach (Goodman, 1961), social media posts (such as Facebook) and posts on online parenting forums. The snowballing approach involved emailing authors' contacts information about the survey, including criterion requirements (a mother in paid employment with a dependent child at home) and a Participant Information Sheet. Respondents were invited to complete the same survey a second time. Those respondents who consented were contacted and emailed a link to the survey six months later. This research has approval from the University's Human Research Ethics Committee.

Participants

There were 573 Australian women in the sample, ranging from 21 to 60 years, with a mean age of 38.49 ($SD=6.78$) years. All women had a dependent child at home under the age of 18 years, and 96 (16.8%) were sole mothers and 477 (83.2%) were married, partnered or in a de-facto relationship. The average number of children in a family was 2.01 (.83) and the average age of the youngest child was 5.71 ($SD=4.96$) years. On average mothers worked 31.68 hours per week ($SD=10.65$).

Measures

Work-family conflict (WFC). WFC was measured using Netemyer, Boles and McMurrian's (1996) five-item scale with responses on a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree". Items include 'The amount of time my job takes up makes it difficult to fulfil family responsibilities' and 'Things I want to do at home do not get done because of the demands my job puts on me'. Items are summed together for a total WFC score. Past studies show an acceptable Cronbach's alpha of .89 (Grandey & Cropanzano, 1999). Reliability coefficients for the current research are reported in parenthesis in Table 5.1 for all scales.

Work-family enrichment (WFE). Carlson, Kacmar, Wayne and Grzywacz's (2006) nine-item work-family enrichment scale was used to measure WFE. Past studies show that the three WFE subscales, WFE Development (Cronbach's $\alpha = .73$), WFE Capital (Cronbach's $\alpha = .91$), and WFE Affect (Cronbach's $\alpha = .90$; Carlson et al., 2006) have acceptable reliability. Each subscale is measured with three items, and responses are on a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree". A high score indicates high WFE for each subscale.

Internality. The level of an internal locus of control, or internality, was measured using Rotter's (1990) 11-item Locus of Control scale, which is a forced-choice paradigm where respondents choose between an internal or external interpretation of an event or way of thinking about a situation. Item scores are summed together for a total score, with low scores indicating an internal locus of control and high scores an external control. Each item has a pair of alternatives lettered 'a' or 'b'. Respondents are asked to select only one statement from each pair, which they more strongly believe is the case. Example pairs include: "1a. Without the right breaks one cannot be an effective leader. 1b. Capable people who fail to become leaders have not taken advantage of their opportunities"; and "2a. Many times I feel that I have little influence over the things that happen to me. 2b. It is impossible for me to believe that chance or luck plays an important role in my life." Previous studies show an acceptable Cronbach's alpha of .79 (Marsh & Richards, 1986).

Marital status. Participants were asked to indicate their marital status, which was coded into two categories: i) married or having a residential partner; or ii) single, separated, divorced or widowed.

Covariates. The following covariates were included in the analysis: age of youngest child, number of children, mother's age, education and income. These covariates have been shown to influence WFC and WFE in previous research (e.g., Dziak et al., 2010; Nicklin & McNall, 2011; Grzywacz & Marks, 2000).

5.4 Statistical analysis

Structural Equation Modelling (SEM) was performed to test the relationships between internality and WFC, and between internality and the three WFE subscales (Development, Capital or Affect) in Mplus (version 7; Muthen & Muthen, 1990-2015). These dependent variables were modelled as latent variables, with factor loadings constrained to be equal over time. The use of latent variables is important when examining relationships over time as it reduces the measurement error and allows for a more accurate estimate of true change compared with approaches that utilize manifest variables. In each model (four in total), the work-family variable (WFC, WFE Development, WFE Capital or WFE Affect) was entered as the dependent variable, internality as the independent variables, and the following variables were entered as covariates – income, education, age of youngest child, marital status, and number of children as well as the work-family variable at time 1. Interaction terms were then added to these models to examine the moderating role of marital status on relationships. Significant interactions were examined using the grouping function in Mplus (Muthen & Muthen, 1990-2015) where separate SEMs were conducted for sole and partnered mothers.

5.5 Results

Sample characteristics

Table 5.1 shows intercorrelations, means, standard deviations, and internal consistency estimates for study and control variables. A number of correlations were significant including positive associations between internality and WFE Development and WFE Affect, and a negative association between internality and WFC. The correlation between internality and WFE Capital was not significant.

There were few differences between sole and partnered mothers in work-family variables (Table 5.2), although sole mothers reported lower income, education and work hours than partnered mothers.

Table 5.1 Means, standard deviations and intercorrelations for study variables

Variable	<i>m (SD)</i>	1	2	3	4	5	6	7	8	9	10
1 Marital status	1.17 (.37)										
2 Income	2.30 (.80)	-.54**	-								
3 Education	2.61 (.66)	-.15**	.25**	-							
4 Number of children	2.01 (.83)	-.05	.08	.04	-						
5 Age of youngest child	5.71 (4.96)	.28**	-.13**	-.13**	.21**	-					
6 Internality	4.68 (2.31)	.07	-.08	-.06	-.05	.08	[.67]				
7 WFC Time 1	3.31 (.87)	.05	-.01	.04	.13**	.07	.16**	[.89]			
8 WFE Cap Time 1	3.70 (.81)	.03	.01	.10*	.00	.00	-.08	-.20**	[.94]		
9 WFE Dev Time 1	3.88 (.85)	-.05	.14**	.15**	-.06	-.15**	-.15**	-.19**	.43**	[.92]	
10 WFE Aff Time 1	3.22 (.92)	.01	.07	.12**	.02	-.08*	-.14**	-.37**	.54**	.50**	[.94]

* $p < .05$, $p < .001$; Marital status: 1=Partnered, 2=Sole; Income: 1=Up to \$80,000, 2=\$80,001 to \$120,000, 3=over \$120,001; Education: 1=up to high school, 2=trade qualification/diploma, 3=tertiary; LOC: 1=Internal, 2=External; Dev = Development; Cap = Capital; Aff = Affect.

Table 5.2 Differences between mothers in demographic, work and work-family variables

Variables	Total (n=573)		Partnered (n=477, 83.2%)		Sole (n=96, 16.8%)		χ^2 or t
	<i>m</i>	(<i>SD</i>)	<i>m</i>	(<i>SD</i>)	<i>m</i>	(<i>SD</i>)	
Income (<i>n</i> , %)							189.91*
up to \$80K	123	(21.5)	53	(11.1)	70	(72.9)	*
\$80 to 120K	154	(26.9)	134	(28.1)	20	(20.8)	
\$120K +	296	(51.7)	290	(60.8)	6	(6.3)	
Education (<i>n</i> , %)							18.61**
Up to high school	55	(9.6)	42	(8.8)	13	(13.5)	
Trade qualification/diploma	116	(20.2)	83	(17.4)	33	(34.4)	
Tertiary	296	(51.7)	352	(73.8)	50	(52.1)	
Age	38.49	(6.78)	37.92	(6.61)	41.33	(6.93)	.35**
Age of youngest child	5.71	(4.96)	5.10	(4.81)	8.75	(4.55)	-6.95**
Number of children	2.01	(.83)	2.03	(.81)	1.93	(.89)	1.09
Work hours	31.68	(10.65)	33.89	(10.17)	31.24	(10.70)	.69*
WFC – time 1	3.31	(.87)	3.29	(.86)	3.40	(.91)	-1.1
WFE Dev – time 1	3.84	(.89)	3.87	(.88)	3.70	(.91)	1.68
WFE Cap – time 1	3.70	(.81)	3.70	(.81)	3.70	(.84)	.31
WFE Aff – time 1	3.88	(.85)	3.22	(.93)	3.24	(.91)	-.24
Internality	4.68	(2.32)	4.61	(2.27)	5.05	(2.49)	-1.72
WFE Dev – time 2	3.74	(.74)	3.74	(.88)	3.72	(.74)	1.21
WFE Cap – time 2	3.73	(.74)	3.74	(.74)	3.72	(.74)	.31
WFE Aff – time 1	3.26	(.89)	3.26	(.90)	3.27	(.88)	.91

Internality and work-family conflict and enrichment

Results showed that internality at time 1 did not predict WFC ($\beta = .02$, $SE = .01$, ns), WFE Capital ($\beta = .00$, $SE = .01$, ns), WFE Affect ($\beta = -.02$, $SE = .01$, ns) or WFE Development ($\beta = .00$, $SE = .01$, ns) at time 2 (Table 5.3).

Results indicated that the relationship between internality and WFC did not differ significantly between sole and partnered mothers ($\beta = -.01$, $SE = .02$, ns). The relationship between internality and WFE Affect ($\beta = -.38$, $SE = .11$, $p < .001$) differed between sole and partnered mothers. Further analysis revealed that this relationship was significant for sole mothers ($\beta = -.24$, $SE = .07$, $p < .001$), but not partnered mothers ($\beta = 0.04$, $SE = .01$, $p = .004$). Similarly, there was a significant difference between sole and partnered working mothers in the positive relationship of internality and WFE Capital ($\beta = -.16$, $SE = .05$, $p = .002$). Further analysis revealed that this relationship was stronger, although not significant for sole mothers ($\beta = -.03$, $SE = .02$, $p = .09$), than partnered mothers ($\beta = -.03$, $SE = .01$, $p = .77$). Finally, sole mothers also differed significantly from partnered mothers in the positive relationship between internality and WFE Development ($\beta = -.16$, $SE = .05$, $p < .001$). Further analysis revealed that the positive relationship was significant for sole mothers ($\beta = -.04$, $SE = .01$, $p = .004$), but not for partnered mothers ($\beta = 0.01$, $SE = .01$, $p = .19$).

Table 5.3 Results of the regression and moderation analysis for internality and the work-family interface over two time points. The dependent variables are measured at time 2.

	WFC	WFE Dev	WFE Cap	WFE Aff
	<i>Coefficient estimate^c</i>	<i>Coefficient estimate^c</i>	<i>Coefficient estimate^c</i>	<i>Coefficient estimate^c</i>
Marital status	.18	.01	.68***	.65***
Education	.04	-.01	.02	-.04
Income	.01	.02	.12***	.10**
Internality	-.02	-.05**	.24	.37**
Number of children	-.05*	.02	-.03	-.03
Age of youngest child	-.01*	.00	.00	.01
Work hours	.00	.00*	.00	.00*
Age	.00	.00	.00	.00
WFC Time 1	1.13***	-	-	-
WFE ^b Time 1	-	.78***	.91***	.95***
Marital status x Internality	-.02	-.03***	-.27**	-.38***

*** $p < .001$ ** $p < .01$ * $p < .05$, ^aThe parameter is set to zero because it is redundant. ^bWFE subgroup corresponding to dependent variable. i.e. for dependent variable WFE Dev, WFE Dev at time 1 was included in the model etc. Dev = Development; Cap = Capital; Aff = Affect. ^cunstandardised.

5.6 Discussion

The present study is the first to examine whether internality was associated with WFC and WFE in a sample of working mothers, and if these relationships differed between sole and partnered mothers. Our results indicated that in the entire sample, internality was not associated with WFC and WFE. However, as discussed below there were some significant interaction effects, such that internality was positively associated with WFE in sole working mothers but not partnered working mothers. These findings have important implications for understanding how personal resources such as Internality may influence work-family experiences.

Contrary to our expectations, internality was not associated with WFC or WFE in this sample of working mothers. Thus, Hypotheses 1 and 2 were not supported. Furthermore, the nature of the relationship between internality and WFC did not differ between sole and partnered mothers; Hypothesis 3 was therefore also not supported. However, consistent with Hypothesis 4, our results indicated that the relationships of internality with the three WFE dimensions (Development, Capital and Affect) differed significantly between sole and partnered mothers. That is, internality was found to be significantly associated with an increase in WFE in sole working mothers, with this relationship not observed in partnered

working mothers.

The findings for internality and WFE can be understood within the context of the COR theory. That is, the COR theory proposes that the saliency of resource gains is stronger in the context of resource loss (Hobfoll, 2001). Sole mothers are more likely to experience resource loss compared with partnered mothers due to factors such as loss of social support, more financial hardship, and time commitments associated with parenting alone and working. As a result, they may be more likely to place greater salience on subsequent gains, such as gaining a sense of achievement or purpose from working, learning new professional skills or advancing in the workplace. Thus, sole mothers with high internality may better acquire additional resources because they are of greater value when parenting alone. The Capital and Development WFE subscales encapsulate aspects of WFE such as developing skills and abilities, gaining knowledge, a sense of accomplishment, and feeling personally fulfilled (Carlson et al., 2006). It may be that the innate characteristics of internals to seek opportunities for growth explain why the findings were significant for these subscales. The Affect subscale of WFE encapsulates good mood and feeling happy from work (Carlson, et al., 2006). Developing resources from work that positively influence performance in the family domain, such as flexibility and social capital (Greenhaus & Powell, 2006) can improve positive state and mood in the work domain (Hammer, Cullen, Neal, Sinclair, & Shafiro, 2005). Internals are more adept at gaining these resources and therefore more likely to have higher scores on the Affect component of WFE. Although there are no known studies examining the relationship between internality and WFE affect, previous studies have found that internality is associated with higher Positive Affect (Michel & Clark, 2009). Positive Affect is characterised by enthusiasm and energy (Watson, Clark, & Tellegen, 1988), and associated with the ability to problem solve, which are characteristics that also reflect high internality (Isen, 2001). Finally, the absence of a significant relationship between internality and some subscales of WFE for partnered mothers may stem from their overall higher resources levels, which may lessen the salience of internality in experiencing WFE.

This study suggests that sole mothers with high internality have greater potential for WFE than sole mothers with low internality, who are then unlikely to experience the positive outcomes related to WFE. This novel finding suggests that the health and functioning consequences for sole working mothers with low internality could be deleterious as sole mothers are already have a greater risk of disadvantage in terms of low income, job instability and poor mental health compared to partnered mothers (Burstrom et al., 2010). This information provides insight into which targeted work-family policies and practices may be relevant and effective to certain employees (Cho et al., 2013). Workshops and training could be implemented to facilitate WFE in sole mothers with low internality. For instance,

employees can be encouraged to identify potential conflicts between work and family ahead of time, and provide guidance on how to manage or remove the possible conflict, or cope with a conflict when it arises (Wayne, Grzywacz, Carlson, & Kacmar, 2007). Another approach is fostering opportunities for professional development. Whilst those high in internality will likely seek such opportunities, those low in internality are less likely and may need more encouragement and support in engaging in opportunities. Finally, organisations could help employees to understand their role in the work-family interface and the influence of characteristics, such as internality on developing WFE (Michel & Clark, 2009; Wayne et al., 2016).

Social policies influence social norms and work-family choices that individuals make (Craig & Mullan, 2010). For instance, in Australia work-family issues, and especially the distribution of caring responsibilities, are considered a private matter and mothers are not always supported in their roles as working mothers (Craig & Mullan, 2010). Unlike in Australia, countries such as France more publically acknowledge the contribution to society and the future of raising children (Craig & Mullan, 2010). An implication of not valuing the contribution of raising children is that working mothers are not supported in combining the two roles (Craig & Mullan, 2010). This is concerning as work and family identities are critical aspects of an individual's self-definition (Aryee & Luk, 1996). A strong sense of importance at work leads to greater investment in career development which is often accompanied by a sense of meaning and purpose, positive affect and a deeper engagement in work tasks (Lobel & St Clair, 1992). These positive experiences are likely to improve performance in the home, that is, increase WFE. In addressing the social policies on work-and family social norms and attitudes can evolve to support mothers in paid employment and improve their potential for WFE.

There are two primary ways in which society and state or government policies can assist sole working mothers who are not experiencing WFE. Firstly, increasing access to resources will provide greater potential for sole mothers to experience WFE. For example, valuing the role of raising children and reducing stigma associated with sole parenting are important areas for society to embrace, and will increase the degree of social support sole mothers experience. Another approach is for government to implement policies aimed at increasing education and re-training opportunities for sole mothers. These opportunities can also lead to greater career opportunities with more stable employment. There is a flow-on effect from this as strong sense of importance in the work role leads to further investment in career development. This is often accompanied by a great sense of meaning and purpose, positive affect and a deeper engagement in work task (Label & St Clair, 1992). These positive experiences are likely to then improve performance in the home, that is be related to higher WFE. The second way to assist sole mothers who are not experiencing WFE is to

implement government policies aimed at reducing WFC because this too has an impact on employee wellbeing and functioning (Allen et al., 2000). Fewer difficulties in combining work and family are reported in countries where there is legislation around state-funded maternity leave and child care, shortened work hours and where the gender wage gap is lower (Craig & Mullan, 2010). Implementing similar policies in Australia may reduce the difficulties for sole mothers in combining work and family and potentially offset the risks of not experiencing WFE.

Another key component for policies to address is the difficulties for mothers to take full-time work roles with flexibility and affordable quality childcare. Individuals who work part-time have less job stability, lower wages, fewer opportunities for advancement and will accrue less superannuation than their full-time counterparts. These are all important resources for sole mothers. Underemployment is a growing trend in Australia with recent figures climbing to 6% (ABS, 2016). As children get older and more independent mothers may seek more hours in the workplace but often find this is difficult to secure (Wayne et al., 2004). The numbers of hours at work is related to work identity (Santee & Jackson, 1979) which in turn positively predicts WFE. Addressing this issue may support sole mothers in experiencing greater WFE and its associated health and productivity benefits.

Strengths, limitations and future studies

A key strength of this research was examining relationships across two time points, 6-months apart. Additionally, the analytical method of modelling dependent variables as latent variables increases the rigor of the findings by reducing measurement error. A limitation of this study is that the sample was comprised of relatively highly educated mothers, thereby reducing the generalizability of findings, and future studies may wish to use a more representative sample. Findings from this study show a clear need for further work to establish whether there are implications of individual differences on WFC and WFE for other family types. Furthermore, future studies should extend on current findings by including an additional time point in order to test the COR theory's saliency of gains following loss principle, especially as the COR theory proposes that the impacts of resource losses are longer lasting than those from gains (Hobfoll, 2001).

5.7 Conclusion

This study has identified the key role of internality on WFE in sole mothers. The present research makes an important contribution to the limited knowledge on individual differences and the work-family interface by demonstrating that differences exist between

sole and partnered working mothers, and thus that family types are an important consideration. Further work is warranted to establish whether other individual differences and family types also differ in work-family experiences. Greater efforts are needed to facilitate work-related resource gains in mothers, particularly in those who have been identified as highly vulnerable, such as sole mothers with low internality.

5.8 References

- ABS. (2007). *Australian Social Trends*. Canberra: Australian Government.
- ABS. (2016). Spotlight on underemployment. *Labour force, Australia, Nov 2016*. cat. no. 6202.0. Australian Bureau of Statistics: Canberra.
- Afifi, T. O., Cox, B. J., & Enns, M. W. (2006). Mental health profiles among married, never-married, and separated/divorced mothers in a nationally representative sample. *Social Psychiatry and Psychiatric Epidemiology*, 41(2), 122-129.
- Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: a review and agenda for future research. *Journal of Occupational Health Psychology*, 5(2), 278-308.
- Andreassi, J. K., & Thompson, C. A. (2007). Dispositional and situational sources of control: Relative impact on work-family conflict and positive spillover. *Journal of Managerial Psychology*, 22(8), 722-740.
- Aryee, S., & Luk, V. (1996). Work and nonwork influences on the career satisfaction of dual-career couples. *Journal of Vocational Behavior*, 49(1), 38-52.
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328.
- Biggart, L., Corr, P., O'Brien, M., & Cooper, N. (2010). Trait emotional intelligence and work-family conflict in fathers. *Personality and Individual Differences*, 48(8), 911-916.
- Burstrom, B., Whitehead, M., Clayton, S., Fritzell, S., Vannoni, F., & Costa, G. (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes—the example of Italy, Sweden and Britain. *Social Science & Medicine*, 70(6), 912-920.
- Carlson, D. S., Kacmar, K. M., Wayne, J. H., & Grzywacz, J. G. (2006). Measuring the positive side of the work-family interface: Development and validation of a work-family enrichment scale. *Journal of Vocational Behavior*, 68(1), 131-164.
- Chen, J., & Wang, L. (2007). Locus of control and the three components of commitment to change. *Personality and Individual Differences*, 42(3), 503-512.
- Cheng, Y. C. (1994). Locus of control as an indicator of Hong Kong teachers' job attitudes and perceptions of organizational characteristics. *The Journal of Educational Research*, 87(3), 180-188.
- Cho, E., Tay, L., Allen, T. D., & Stark, S. (2013). Identification of a dispositional tendency to experience work-family spillover. *Journal of Vocational Behavior*, 82(3), 188-198.
- Crain, T. L., & Hammer, L. B. (2013). Work-Family Enrichment: A Systematic Review of Antecedents, Outcomes, and Mechanisms, in A.B. Bakker (ed.) *Advances in Positive Organizational Psychology (Advances in Positive Organizational Psychology*,

- Volume 1) Emerald Group Publishing Limited, 303-328.
- Dziak, E., Janzen, B. L., & Muhajarine, N. (2010). Inequalities in the psychological well-being of employed, single and partnered mothers: the role of psychosocial work quality and work-family conflict. *International Journal for Equity in Health*, 9(1), 1-8.
- Grandey, A. A., & Cropanzano, R. (1999). The Conservation of Resources Model applied to work-family conflict and strain. *Journal of Vocational Behaviour*, 54(2), 350-370.
- Greenhaus, J. H., & Beutell, N. J. (1985). Sources of Conflict between Work and Family Roles. *The Academy of Management Review*, 10(1), 76-88.
- Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, 31(1), 72-92.
- Grzywacz, J. G., & Marks, N. G. (2000). Reconceptualizing the work-family interface: an ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111-126.
- Hammer, L. B., Cullen, J. C., Neal, M. B., Sinclair, R. R., & Shafiro, M. V. (2005). The longitudinal effects of work-family conflict and positive spillover on depressive symptoms among dual-earner couples. *Journal of Occupational Health Psychology*, 10(2), 138-154.
- Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: Methodology in the Social Sciences* (1st ed.). New York: The Guildford Press.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualising stress. *American Psychologist*, 44(3), 513-524.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing Conservation of Resources Theory. *Applied Psychology: An International Review*, 50(3), 337-421.
- Hoffi-Hofstetter, H. & Mannheim, B. (1999). Managers' coping resources, perceived organizational patterns, and responses during organizational recovery from decline. *Journal of Organizational Behavior*, 20(5), 665-685.
- Innstrand, S. T., Langbelle, E. M., Espnes, A. G., & Aasland, G. O. (2008). Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations. *Work & Stress*, 22(1), 1-15.
- Isen, A. M. (2001). An influence of positive affect on decision making in complex situations: Theoretical issues with practical implications. *Journal of Consumer Psychology*, 11(2), 75-85.
- Ito, J. K., & Brotheridge, C. M. (2003). Resources, coping strategies, and emotional exhaustion: A conservation of resources perspective. *Journal of Vocational Behavior*, 63(3), 490-509.

- Lobel, S., & St. Clair, L. (1992). Effects of family responsibilities, gender, and career identity salience on performance outcomes. *Academy of Management Journal*, 35(5), 1057–1069.
- Maercker, A. & Herrle, J. (2003). Long-term effects of the Dresden bombing: Relationships to control beliefs, religious belief, and personal growth. *Journal of Traumatic Stress*, 16(6), 579–587.
- Magee, C. A., Stefanic, N., Caputi, P., & Iverson, D. C. (2012). The association between job demand/control and health in employed parents: The mediating role of work-to-family interference and enhancement. *Journal of Occupational Health Psychology*, 17(2), 195-205.
- Marsh, H. W., & Richards, G. E. (1986). The Rotter locus of control scale: The comparison of alternative response formats and implications for reliability, validity, and dimensionality. *Journal of Research in Personality*, 20(4), 509-528.
- McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work-family enrichment. *Journal of Business Psychology*, 25(1), 381-396.
- Michel, J. S., & Clark, M. A. (2009). Has it been affect all along? A test of work-to-family and family-to-work models of conflict, enrichment, and satisfaction. *Personality and Individual Differences*, 47(3), 163-168.
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work–family conflict: A meta-analytic review. *Journal of Organizational Behavior*, 32(5), 689-725.
- Mischel, W. (2013). *Personality and Assessment*. Mahwah, NJ: Erlbaum.
- Muthen, L. K., & Muthen, B. O. (1990-2015). *Mplus User's Guide* (7th Ed.) Los Angeles, CA: Muthen & Muthen.
- Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work–family conflict and family–work conflict scales. *Journal of Applied Psychology*, 81(4), 400.
- Ng, T.W., & Feldman, D.C. (2011). Locus of control and organizational embeddedness. *Journal of Occupational and Organisational Psychology*, 84(1), 173-190.
- Nicklin, J. M., & McNall, L. A. (2013). Work–family enrichment, support, and satisfaction: A test of mediation. *European Journal of Work and Organizational Psychology*, 22(1), 67-77.
- Pew Research Center, November, 2015, *Raising Kids and Running a Household: How Working Parents Share the Load*. Washington DC: Pew Research Center.
- Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*, 45(4), 489-493.

- Santee, R. T., & Jackson, S. E. (1979). Commitment to self-identification: A sociopsychological approach to personality. *Human Relations*, 32(2), 141–158.
- Sherman, A.C., Higgs, G.E., & Williams, R.L. (1997). Gender differences in the locus of control construct. *Psychology & Health*, 12(2), 239-248.
- Solomon, Z., Mikulincer, M., & Avitzur, E. (1988). Coping, locus of control, social support, and combat-related posttraumatic stress disorder: a prospective study. *Journal of Personality and Social Psychology*, 55(2), 279-285.
- Spector, P. E. (1988). Development of the Work Locus of Control Scale. *Journal of Occupational Psychology*, 61, 335-340.
- Stoeva, A. Z., Chiu, R. K., & Greenhaus, J. H. (2002). Negative affectivity, role stress, and work–family conflict. *Journal of Vocational Behavior*, 60(1), 1-16.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, 54(6), 1063-1070.
- Wayne, J. H., Grzywacz, J. G., Carlson, D. S., & Kacmar, K. M. (2007). Work–family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review*, 17(1), 63-76
- Wayne, J. H., Michel, J. S., & Matthews, R. A. (2016). Is It Who You Are That Counts? The Importance of Personality and Values to the Work–Family Experience, in T.D. Allen & L.T. Eby (Eds.) *The Oxford Handbook of Work and Family*, 68-80. Oxford, UK: Oxford University Press.
- Wells, J. D., Hobfoll, S. E., & Lavin, J. (1999). When it rains, it pours: The greater impact of resource loss compared to gain on psychological distress. *Personality and Social Psychology Bulletin*, 25(9), 1172-1182.

CHAPTER 6: WORK-TO-FAMILY PROFILES, FAMILY STRUCTURE AND BURNOUT IN MOTHERS

Robinson, L.D., Magee, C.A., & Caputi P. (2016). Work-to-family profiles, family structure and burnout in mothers. *Journal of Managerial Psychology*, 31(7), 1167 - 1181

6.1 Abstract

Purpose: To identify work-to-family profiles in working mothers, test whether profiles differ between sole and partnered mothers, and examine whether the work-to-family profiles are associated with burnout. **Design and methodology:** Data on work-to-family conflict (WFC), work-to-family enrichment (WFE), burnout, and relevant socio-demographic covariates were collected via a self-report online survey. Latent Profile Analysis on WFC and WFE items was used to identify profiles in 179-sole and 857-partnered mothers in paid employment. Regression analyses were performed to examine whether profiles were associated with burnout. **Findings:** Five distinct work-to-family profiles were identified: Harmful, Negative Active, Active, Beneficial and Fulfilled. Profile membership differed significantly between sole and partnered mothers, with sole mothers more likely to be in the Harmful profile. The five profiles had differing implications for burnout. **Practical implications:** WFC and WFE can co-occur, and have differing implications health and well-being. It is important to consider both WFC and WFE when addressing employee burnout. Furthermore, sole mothers may need greater assistance in reducing WFC and increasing WFE in order to minimize burnout. **Originality/value:** This study contributes to existing research by demonstrating differences in work-to-family profiles between sole and partnered mothers, and highlights the need for future research on diverse family types.

Work-to-family profiles, family structure and burnout in mothers

6.2 Introduction

A large body of research has examined components of the work-to-family interface such as work-to-family conflict (WFC) and work-to-family enrichment (WFE) (Allen *et al.*, 2000; McNall *et al.*, 2010). Although many studies have explored WFC and WFE in traditional family structures (i.e., two-parent families), very little is known about experiences in other family structures (e.g., sole-parent families). This is an important gap because family structures are increasingly diverse, and it is anticipated that this trend will continue (OECD, 2014). For instance, the proportion of sole parent families in Australia is projected to increase by between 47% and 70% during the period 2011 to 2036 (ABS, 2015).

Sole mothers may have unique experiences of WFC and WFE compared to partnered mothers due to a number of factors, including the absence of a partner to share family responsibilities. In the present study, we utilize a person-centered approach to investigate distinct work-to-family profiles (based on WFC and WFE) in sole and partnered Australian mothers. Person-centered approaches are particularly meaningful because rather than investigating WFC and WFE in isolation, they allow for naturally occurring WFC and WFE combinations to be identified. The primary aim of this paper is to clarify the nature of work-to-family profiles in this population, and to investigate any differences in profile membership between sole and partnered mothers. The second aim is to investigate whether identified profiles are associated with burnout, this is a highly relevant issue for employees and it may be influenced by components of the work-to-family interface, such as WFC (Innstrand *et al.*, 2008).

Work-Family Conflict and Enrichment

WFC occurs when the demands of work interfere with the ability to perform family duties (Greenhaus and Beutell, 1985). WFC is linked to adverse outcomes, including lower job productivity and satisfaction, poorer mental and physical health, and higher burnout (Allen *et al.*, 2000; Magee *et al.*, 2012). The Conservation of Resources (COR) theory (Hobfoll, 2001) has been applied in numerous studies to understand the causes and consequences of WFC (Grandey and Cropanzano, 1999). According to COR theory, individuals seek to retain, gain, or avoid losing, valued resources such as personal health, stable employment, and support from co-workers (Hobfoll, 2001). Competing demands from work and family roles promotes resource loss, which is a major source of stress. Prolonged WFC can lead to poor health outcomes such as burnout and depression (Hobfoll and Shirom, 2001).

Work can also benefit individuals and their families (Greenhaus and Powell, 2006). WFE is a process that occurs when work-related experiences generate or promote the development of resources (e.g., mood, psychosocial benefits) that benefit the family domain (Carlson *et al.*, 2006). Research shows that higher WFE is associated with positive outcomes, including higher job satisfaction, and improved physical health and mental health (McNall *et al.*, 2010). The Resource Gain-Development (RGD) model provides a framework for understanding WFE (Wayne *et al.*, 2007). The RGD model assumes that individuals have a natural predisposition to developing, achieving and growing to the greatest degree possible for themselves and groups or systems they belong to, including family and organizations (Wayne *et al.*, 2007). According to the RGD model, WFE occurs when resources gained in the work domain are applied, sustained and reinforced in the family domain. The extent of enrichment experienced is dependent on the level of resources an individual already possesses (Wayne *et al.*, 2007). For example, compared to mothers with few resources, mothers with high resource levels (e.g., high income or a supportive partner) can more readily acquire additional resources, and consequently experience greater WFE.

Work-Family Profiles

Previous work-family research has tended to investigate components such as WFC and WFE separately (e.g., Allen *et al.*, 2000; McNall *et al.*, 2010). However, WFC and WFE are co-occurring processes, and individuals can experience different combinations of WFC and WFE simultaneously (Grzywacz and Marks, 2000). For example, an individual who has a demanding job (e.g., long work hours, high demands) could experience a loss of time and energy (high WFC) but simultaneously experience skill development (high WFE). Person-centered approaches capturing individual differences in levels of WFC and WFE are important because they have the potential to provide a more comprehensive understanding of the complexity of work-to-family processes.

The existence of distinct work-family conflict and enrichment profiles has been supported in some previous studies (e.g. Demerouti and Geurts, 2004; Mauno *et al.*, 2011; Rantanen *et al.*, 2013). Some studies have examined bi-directional measures of work-family experience, however, three studies have specifically examined profiles based on the work-to-family direction (that is, WFC and WFE) (Grzywacz *et al.*, 2008; Rantanen *et al.*, 2011; Rantanen, Kinnunen and Pulkkinen, 2013). All three studies identified four profiles, which despite being labelled differently between studies, represented similar combinations of WFC and WFE: (1) low WFC/high WFE (Beneficial, Balanced, Beneficial imbalance); (2) high WFC/high WFE (Active, Blurred, Active); (3) low WFC/low WFE (Passive, Segmented, Passive balance); and (4) high WFC/low WFE (Harmful, Imbalanced, Harmful imbalance) (Grzywacz *et al.*, 2008; Rantanen *et al.*, 2011; Rantanen, Kinnunen and Pulkkinen, 2013).

The three studies examining profiles based on both work-to-family and family-to-work processes have produced some different findings in relation to the number and types of profiles (Demerouti and Geurts, 2004; Mauno *et al.*, 2011; Rantanen *et al.*, 2013). However, some of the work-family conflict and enrichment profiles noted above are evident in these studies. For example, Demerouti and Geurts (2004) identified five profiles: (1) high positive home - work interaction (HWI) (positive HWI); (2) high positive work-home interaction (WHI) (positive WHI); (3) high negative HWI/WHI (negative interaction); (4) high positive and negative HWI/WHI (both positive and negative interaction); and (5) low positive and negative HWI/WHI (no interaction). Mauno *et al.* (2011) also identified five profiles, however they were: (1) low WFC/high WFE/low family-work conflict (FWC)/high family-work enrichment (FWE) (Beneficial); (2) low WFC/low WFE/low FWC/low FWE (Passive); (3) high WFC/high WFE/very high FWC/high FWE (Active - 1); (4) high WFC/high WFE/moderate FWC/high FWE (Active - 2); (5) high WFC/low WFE/low FWC/high FWE (Contradictory). Despite differences in sample composition, analysis method, and measures (e.g., directionality of WFE and WFC), these studies clearly demonstrate distinct profiles based on multiple aspects of the work-family interface.

An important gap in the literature is that very little is known about the nature of work-to-family profiles in employed mothers, and sole working mothers in particular. Although not yet investigated, Rantanen *et al.*'s (2013) study provides some indication that women could experience different combinations of WFC and WFE compared with men. Unlike other studies they did not identify a profile low in WFC and low in WFE (Passive profile). They attributed the absence of this profile to the large proportion of women (88%) in their sample. In particular, Rantanen *et al.* (2013) suggested that because women are more active in both work and family roles compared with men, they are less likely to experience a combination of low WFC and low WFE. However, Rantanen *et al.*'s (2013) study provides only a partial insight into the nature of the work-to-family interface in working mothers because it included some men and did not examine variables important in the current context such as number of children and family structure. Therefore, the first aim of this study was to identify the number and nature of work-to-family profiles in a sample of women with dependent children. We focused on developing a comprehensive understanding on how work impacts family through WFC and WFE. As such, this study examines conflict and enrichment in the work to family direction only. Drawing on Rantanen *et al.* (2013) findings we expected that a profile low in WFC and low in WFE (that is, a Passive profile) would not exist in a sample of only working mothers.

Work-to-family profiles and family structure in mothers

The second aim of this paper was to investigate whether work-to-family profiles differ

between sole and partnered mothers. The propositions of COR theory (Hobfoll, 2001) suggest that sole and partnered mothers could differ in relation to work-to-family profiles. This is because relationships can provide individuals with important resources such as support, income, and companionship (Grandey and Cropanzano, 1999; Hobfoll, 2001). The absence of a partner could thus mean that compared to partnered mothers, sole mothers have access to fewer resources which can increase vulnerability to further losses. This is an important consideration as individuals with low resource reserves are more vulnerable to further losses during times of high demands, such as when experiencing competing demands from work and family (Hobfoll and Shirom, 2001). Sole mothers may then have greater vulnerability to resource loss and high WFC.

No existing studies have investigated whether sole and partnered working mothers experience different combinations of WFC and WFE. However, there is some recent research showing that levels of WFC differ between sole and partnered mothers (e.g. Dziak *et al.*, 2010; Innstrand *et al.*, 2010). Dziak *et al.* (2010), for example, found that sole mothers had higher levels of WFC compared with partnered mothers. Another study by Innstrand *et al.* (2010) compared WFC between four different family structures, and found that single parents (73% of whom were women) had significantly higher levels of WFC compared with partnered parents.

Our aim is to extend these findings by investigating whether profiles of WFC and WFE differ between sole and partnered working mothers. According to the propositions of COR theory, we specifically hypothesize the following.

Hypothesis 1a. Sole mothers have a greater likelihood of belonging in a profile high in WFC and low in WFE than partnered mothers.

Hypothesis 1b. Sole mothers have a greater likelihood of belonging in a profile low in WFC and high in WFE than partnered mothers.

Profiles and Burnout

Building on past studies showing that work-family profiles have differing implications for indicators of health and wellbeing (Demerouti and Geurts, 2004; Rantanen *et al.*, 2013), the final aim of this paper was to examine the relationships between work-to-family profiles and burnout. Previous research shows that compared to the Active and Contradictory profiles, the Beneficial profile had the highest life satisfaction and the lowest psychological strains Rantanen *et al.*, 2013). Job and life satisfaction, core-self-evaluation, and job exhaustion have also differed across work-family profiles (Demerouti and Geurts, 2004; Rantanen *et al.*, 2011).

Distinct profiles of WFC and WFE may have implications for burnout, which represents a “combination of physical fatigue, emotional exhaustion, and cognitive

weariness” (Shirom, 1989, p. 33). Existing studies have demonstrated that WFC is associated with burnout (e.g., Innstrand *et al.*, 2008), which affects work performance and parenting, and is a growing problem, particularly for women employees (Jarvisalo *et al.*, 2005). The associations between WFC and burnout can be understood within the context of COR theory. WFC reflects a process whereby work-related demands lead to a threatened, or actual loss, of personal resources, leading to stress (Grandey and Cropanzano, 1999). Resource losses are then exacerbated as individuals invest available resources to prevent further losses, leading to a spiral of resource losses, and over time burnout (Hobfoll, 2001). It is then plausible that profiles characterized by higher levels of WFC will experience higher burnout levels than profiles with lower WFC levels.

In contrast, WFE has been linked with lower levels of burnout (Innstrand *et al.*, 2008). According to COR theory, in times of low stress individuals seek to gain surplus resources in order to prevent or minimise future losses (Hobfoll, 2001). Moreover, any gains can at least partially offset stress and potentially minimise burnout; thus suggesting that WFE may serve as a buffer against the adverse effects of WFC. It is then plausible that individuals with high WFE may not experience the effects of WFC to the same extent as those with low WFE. The following hypotheses are proposed.

Hypothesis 2a. Compared to individuals with other profiles, working mothers with high WFE and low WFC have the lowest personal and work burnout levels.

Hypothesis 2b. Compared to individuals with other profiles, working mothers with low WFE and high WFC have the highest personal and work burnout levels.

Hypothesis 2c. Compared to individuals with profiles high in WFE and low in WFC, working mothers with high WFE and high WFC have the highest personal and work burnout levels.

Hypothesis 2d. Compared to individuals with profiles low in WFE and high in WFC, working mothers with high WFE and low WFC have the lowest personal and work burnout levels.

6.3 Method

Sample

The sample size included 1036 mothers in paid employment with a dependent child (179-sole and 857-partnered). The average age of mothers was 38.44 years ($SD=6.79$). The overall mean number of dependent children was 2.01 ($SD=.82$), which is consistent with the Australian average of 1.9 children per family (ABS, 2013). The mean age of the youngest child in a family was 5.73 years ($SD=4.94$). About 60% had tertiary qualifications, which is higher than the Australian general population (25%) (ABS, 2014). The proportion of

Australian-born versus overseas-born participants was higher in the present sample (82.0% and 18%, respectively) compared with the Australian general population (72.7% and 27.3%, respectively) (ABS, 2013).

Procedure

Potential respondents were recruited using a snowball sampling method (Goodman, 1961), posts on social media, including Twitter, and online parenting forums. Posts provided information on the study and an invitation to participate. Snowball sampling involved emailing authors' contacts and asking them to forward the details of the study onto others who potentially meet the eligibility criteria, which was a mother in paid employment with a dependent child aged less than 18 years. Those who received the email were asked to forward the email to other potential respondents. Emails had a link to the online survey. To ensure respondents met the inclusion criteria, potential participants were asked whether they were in paid employment, their work hours, gender and age of youngest residential child. Those participants who did not meet these requirements were automatically exited from the survey. This research has approval from the University's Human Research Ethics Committee.

Measures

Work-to-family conflict (WFC). Netemeyer *et al.*'s (1996) five-item scale was used in this study. An example item is "The demands of my work interfere with my home and family life". Responses were recorded on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Work-to-family enrichment (WFE). Carlson *et al.*'s (2006) nine items WFE measure were used in this study. An example item is "My involvement in work helps me feel personally fulfilled and this helps me be a better family member". Responses were recorded on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

Burnout. Two of the three subscales of the Copenhagen Burnout Inventory (CBI) - personal (PB) and work-related (WB) - were used to measure burnout (Kristensen *et al.*, 2005). The two scales are related but distinct from one another, as supported by factor analysis: $\chi^2 = 419.31$ (df = 1.43, $p < 0.001$). An example item from the PB subscale is "How often do you feel worn out?". Responses for this subscale, and four of the WB items were recorded on a 5-point Likert scale ranging from 1 (always) to 5 (never/almost never). The scale labels were then re-coded to the original labels of 100 (always), 75, 50, 25, and 0 (Never). An example item from the WB subscale is "Does your work frustrate you?". The remaining items are measured on a 5-point Likert scale ranging from 1 (To a very high degree) to 5 (To a very low degree). Again scale labels were re-coded in to the original labels of 100

(always), 75, 50, 25, and 0 (Never). Items for each subscale were summed together to make a total score, and higher scores reflect greater burnout levels.

Demographic Characteristics. There is evidence that some demographic variables influence WFC and WFE (Allen *et al.*, 2000; Rantanen *et al.*, 2013). As such, the following were included in this study: age, age of youngest child, number of children, marital status (Rantanen *et al.*, 2013), country of birth (Grzywacz and Marks, 2000), education (Dziak *et al.*, 2010) and household income (Allen *et al.*, 2000). Marital status was coded into two categories: married or partnered relationship, versus single, separated, divorced or widowed.

6.4 Results

Sample Characteristics

Table 6.1 provides information on correlations between study variables. WFC was negatively related to WFE, and positively related to all other variables. WFE was negatively related to the age of the youngest child, and work and personal burnout. Work and personal burnout were positively correlated. Demographic variables of sole and partnered mothers were examined using *t*-tests and chi-square analyses in SPSS (IBM Corp, 2010) in order to provide greater insight into the sample (Table 6.2). Sole mothers had significantly lower household incomes, and worked significantly longer hours, than partnered mothers.

Table 6.1 Correlations and means (standard deviations) for sample

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 WFC	3.35	0.86	(0.86)										
2 WFE	3.54	0.74	-0.30**	(0.93)									
3 Years in current role	5.45	4.88	0.08*	-0.06									
4 Work Hours ^a	31.54	10.86	0.35**	-0.02	0.05								
5 Number of children	1.94	0.87	0.08*	0.06	0.07*	-0.06*							
6 Age of youngest child (years)	5.84	4.98	0.09**	-0.08**	0.12**	0.30**	0.02						
7 Age (years)	38.21	6.68	0.08**	-0.05	0.22**	0.20**	0.16**	0.71**					
8 PB	58.14	17.14	0.47**	-0.35**	0.03	0.08*	0.02	-0.02	-0.03	(.90)			
9 WB	48.34	18.08	0.61**	-0.48**	0.11**	0.23**	-0.03	0.10**	0.02	0.70**	(.88)		
10 Education ^b	2.58	0.69	0.04	0.15**	0.06	-0.01	0.01	-0.11**	0.11**	-0.06	-0.05		
11 Marital status ^c	0.83	0.38	-0.11*	0.10**	0.05	-0.08**	0.05	0.29**	-0.18*	-0.11**	-0.12**	1.44**	
12 Household income ^d	2.29	0.80	0.01	0.13**	0.13**	0.12**	0.04	-0.14**	-0.03	-0.12**	-0.06	0.28**	0.55**

Notes: WFC – work-family conflict; WFE – work-family enrichment; PB – personal burnout; WB – work burnout; ^awork hours is continuous ^b1=up to high school, 2=trade or certificate; and 3=tertiary; ^c 0=sole and 1=partnered; ^d1=up to \$80,000; 2=\$80,001 to \$120,000; 3=\$120,001+. Reliability coefficients are reported in parentheses on the diagonal for relevant variables. * $p < 0.05$; ** $p < 0.01$ (two tailed).

Table 6.2 Personal and work characteristics of the sample, and differences between sole and partnered mothers

	Total (<i>n</i> =1036) N (%)	Sole (<i>n</i> =179) N (%)	Partnered (<i>n</i> =857) N (%)	Chi Square or <i>t</i>-test (<i>p</i>-value)
Ethnicity				
Australian	894 (86.3)	156 (86.1)	738 (87.2)	n.s.
Other	142 (13.7)	23 (13.9)	119 (12.8)	
Education				
Up to High School	118 (11.4)	27 (15.1) ^a	91 (10.6) ^a	<i>p</i> <.001
Trade/certificate	200 (19.3)	60 (33.5) ^a	140 (16.3) ^b	
Tertiary	718 (69.3)	92 (51.4) ^a	626 (73.0) ^b	
Income (\$)				
Up to 80K	220 (21.2)	130 (72.6) ^a	90 (10.5) ^b	<i>p</i> <.001
81K to 120K	293 (28.3)	38 (21.2) ^a	255 (29.8) ^b	
More than 120K	523 (50.5)	11 (6.1) ^a	512 (59.7) ^b	
Work hours				
<21 hours	174 (16.8)	29 (16.2) ^a	145 (16.9) ^a	<i>p</i> <.001
21 – 34 hours	380(36.7)	42 (23.5) ^a	338 (39.4) ^b	
More than 34 hours	482 (46.5)	108 (60.3) ^a	374 (43.6) ^b	
Age in years, mean (SD)	39.24 (6.95)	40.80 (7.53)	37.67 (6.36)	<i>p</i> <.001
Age of youngest child in years, mean (SD)	7.10 (4.84)	9.02 (4.94)	5.17 (4.73)	<i>p</i> <.001
Number of children, mean (SD)	1.90 (.93)	1.84 (1.02)	1.96 (.84)	n.s.

n.s. not significant at *p*<.05; columns with the same subscript letter denote that there are no significant differences in column proportions between sole and partnered mothers at the .05 level.

Work-to-Family Profiles

Latent profile analysis (LPA) using Mplus (version 7; Muthen and Muthen, 1998-2015) was performed to identify distinct work-to-family profiles on the WFC and WFE items. LPA is a person-centered approach that identifies groupings of individuals who have similar characteristics on the given variables but differ from those in other groups (Marsh *et al.*, 2009). Consistent with current recommendations, several model fit indices - the Bayesian information criterion (BIC), entropy, the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR), and the bootstrap likelihood ratio test - were used guide the selection of the optimal numbers of profiles (Muthen and Muthen, 1998-2015; Nylund *et al.*, 2007). An optimal number of profiles is characterized by a minimum LMR value, a minimum BLRT-value and significant BLRT *p*-value, and maximum entropy. In addition the meaning, distinctiveness and interpretability of identified profiles, together with past research guide model selection (Berlin *et al.*, 2014; Marsh *et al.*, 2009).

We investigated the model fits of models with two to six profiles. As shown in Table 6.3, the six-profile solution had the lowest LMR value, and the lowest, and significant, BLRT value as well as the highest entropy value. However, the smallest class was below 5% of the sample and was not distinctive from other profiles (Bauer and Curran, 2004). The five-

profile model had the second lowest BIC values, provided an improved fit relative to the four-profile model, and identified five-distinct profiles. Therefore, the five-profile model was deemed to provide the most parsimonious solution.

The five profiles were named according to their scores across the WFC and WFE items. The means for WFC and WFE items and total scores for the Negative Active, Beneficial, Fulfilled, Active and Harmful profiles are shown in Table 6.4. Analyses of variance indicated significant differences in WFC ($F_{(4,1031)}=350.47, p<.001$) and WFE ($F_{(4,1031)}=1606.63, p<.001$) across profiles, with post-hoc comparisons indicating significant pairwise differences between profiles (see Table 6.4 for a summary of these results). We briefly outline these differences below when describing the characteristics of the five profiles. Where relevant, we utilize labels employed in previous research to name comparable profiles (Harmful, Negative Active, Active, Beneficial and Fulfilled). For clarity, the characteristics of the profiles are described at a construct level unless there are any divergent patterns at an item level.

Profile 1 ($n=243$; 23.5%) had medium scores on WFC items and medium-to-high scores on WFE items. This profile was labelled Negative Active. The second profile ($n=229$; 22.1%) had lower scores across the WFC items compared with the other profiles, and higher scores across WFE items compared with most of the profiles. Consistent with patterns observed in previous research, we labelled this profile Beneficial. Profile 3 ($n=121$; 11.7%) had a similar pattern of low WFC and high WFE. However, scores on the WFE items (particularly items assessing fulfilment, accomplishment and success) were higher in this profile compared with the Beneficial profile (along with all other profiles). We therefore labelled this third profile Fulfilled. Profile 4 ($n=349$; 33.7%) had generally high scores on all WFC and WFE items; consistent with previous research, we labelled this profile Active. The fifth profile ($n=94$; 9.1%) had higher scores across all WFC items and low scores on WFE items. Consistent with existing studies, we labelled this profile Harmful.

Table 6.3 Fit indices for the estimated solutions of the latent class analyses.

Classes	Log likelihood	BIC	Entropy	BLRT
2	-18051.70	36401.95	.91	-20002.57*
3	-17205.54	34813.79	.91	-18054.70*
4	-16736.47	33979.78	.90	-17205.64*
5	-16736.47	33201.46	.91	-16736.47*
6	-16004.31	32723.77	.92	-16295.23*

BIC, Bayesian information criterion; BLRT, bootstrap likelihood ratio; * BLRT p value < 0.05.

Table 6.4 Means (M) and standard deviations (SD) for characteristics and burnout of the five identified work-family profiles

	Harmful	Negative Active	Beneficial	Active	Fulfilled	F
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	
Size (N(%))	94 (9.1)	243(23.5)	229 (22.1)	349 (33.7)	121 (11.7)	-
Sole mothers (N(%))	23(24.5)	52 (29.1)	32 (14.0)	58 (16.6)	14 (11.6)	39.35*
Partnered mothers (N(%))	71 (75.5)	191(22.3)	197 (86.0)	291 (83.4)	107(88.4)	172.53*
Mean total work-family conflict (WFC)	3.70 (0.85)	3.84 (0.57)	2.33 (0.46)	3.82 (0.45)	2.67 (0.71)	350.47**
The demands of my work interfere with my family life	3.80 (1.05)	3.91 (0.67)	2.44 (0.80)	3.91 (0.63)	2.76 (0.97)	181.50**
The amount of time my job takes up makes it difficult to fulfil family responsibilities	3.66 (1.06)	3.78 (0.82)	2.20 (0.66)	3.77 (0.68)	2.48 (0.81)	214.08**
Things I want to do at home do not get done because of the demands my job puts on me	3.89 (0.90)	4.07 (0.66)	2.41 (0.84)	4.03 (0.56)	2.98 (1.01)	220.61**
My job produces strain that makes it difficult to fulfil family duties	3.66 (1.09)	3.74 (0.82)	2.07 (0.56)	3.62 (0.78)	2.28 (0.83)	220.89**
Due to work-related duties, I have to make changes to my plans for family activities	3.59 (1.04)	3.69 (0.93)	2.55 (0.99)	3.79 (0.80)	2.87 (1.10)	79.34**
Mean total work-family enrichment (WFE)	2.09 (0.49)	2.98 (0.31)	3.73 (0.33)	3.83 (0.30)	4.64 (0.28)	1060.63**
Helps me to understand different viewpoints	2.68 (0.95)	3.19 (0.84)	3.76 (0.66)	3.82 (0.66)	4.41 (0.68)	102.74**
Helps me to gain knowledge	2.50 (0.90)	3.19 (0.85)	3.78 (0.65)	3.89 (0.62)	4.58 (0.53)	152.65**
Helps me acquire skills	2.51 (0.97)	3.21 (0.83)	3.76 (0.61)	3.89 (0.63)	4.57 (0.56)	147.25**
Puts me in a good mood	1.80 (0.71)	2.22 (0.59)	3.46 (0.64)	3.40 (0.64)	4.51 (0.58)	411.83**
Makes me feel happy	1.83 (0.65)	2.49 (0.60)	3.57 (0.60)	3.64 (0.54)	4.56 (0.50)	470.01**
Makes me cheerful	1.77 (0.59)	2.35 (0.56)	3.32 (0.64)	3.30 (0.61)	4.38 (0.57)	370.21**
Helps me feel personally fulfilled	1.90 (0.66)	3.34 (0.68)	3.96 (0.54)	4.19 (0.51)	4.93 (0.25)	494.16**
Provides me with a sense of accomplishment	1.96 (0.62)	3.51 (0.58)	3.97 (0.55)	4.21 (0.43)	4.95 (0.22)	562.71**
Provides me with a sense of success	1.85 (0.57)	3.32 (0.64)	3.86 (0.63)	4.13 (0.49)	4.83 (0.39)	468.31**
Personal burnout (mean)	11.30 (2.93)	11.10 (2.29)	7.98 (2.66)	9.99 (2.37)	8.00 (2.96)	37.67(4)**
Work burnout (mean)	9.36 (2.38)	8.51 (2.10)	4.95 (1.93)	9.92 (2.10)	4.61 (2.01)	91.26(4)**
Work hours	31.77 (10.04)	22.88 (10.31)	25.60 (10.02)	30.83 (11.13)	30.83 (11.13)	1.98
Number of children	1.74 (0.75)	1.93 (0.96)	1.86 (0.82)	2.07 (0.90)	1.88 (0.74)	3.85*
Age of youngest child (years)	6.43 (4.75)	6.87 (5.30)	4.94 (4.61)	5.95 (5.04)	4.68 (4.56)	6.62**
Mother's age (years)	38.96 (6.75)	38.81 (7.12)	37.66 (6.25)	38.33 (6.65)	37.12 (6.46)	2.03

*significant at $p<.05$ **significant at $p<.001$.

Table 6.4 shows that there were no significant differences across profiles in work hours or mother's age. The number of children across profiles differed significantly ($F_{(4,1031)}=6.62, p<.001$). Mothers in the Active profile had the most number of children ($m=2.07, SD=.90$) and mothers in the Harmful profile had the fewest number of children ($m=1.74, SD=.75$). The age of the youngest child at home also differed significantly across profiles ($F_{(4,1031)}=3.85, p<.05$) and was the lowest for the Fulfilled profile ($m=4.68, SD=4.56$) and the highest for the Negative Active profile ($m=6.87, SD=4.75$).

Work-to-Family profiles in sole and partnered mothers

As shown in Table 6.4 profile membership differed significantly between sole and partnered mothers ($\chi^2(4)=13.04, p=.01$). Post-hoc analyses indicated that partnered mothers were more likely than sole mothers to be in the Beneficial profile than in the Harmful profile ($\chi^2(1)=5.20, p=.02$), and the Fulfilled profile than the Harmful profile ($\chi^2(1)=5.20, p=.02$). A significantly greater proportion of partnered to sole mothers were in the Fulfilled profile compared to the Negative Active profile ($\chi^2(1)=5.26, p=.02$).

Work-to-Family profiles and burnout

Personal burnout scores differed significantly between the profiles ($F_{(4,1031)}=37.67, p<.001$). Post-hoc analyses showed that the Harmful profile had significantly higher personal burnout than Beneficial Fulfilled, and Active profiles at $p<.001$ (Table 6.4). The Negative Active profile had significantly higher personal burnout than Beneficial, Fulfilled, and Active profiles at $p<.001$. Finally, the Active profile had significantly higher personal burnout than the Beneficial and Fulfilled profiles at $p<.001$. Work burnout scores differed significantly between profiles ($F_{(4,1031)}=91.26, p<.001$). Post-hoc analyses showed that the Harmful work burnout levels were significantly higher than Beneficial, Negative Active, Active and Fulfilled levels $p<.05$. The Negative Active profile had significantly higher work burnout levels than the Beneficial, Active and Fulfilled profiles and the Active profile had significantly higher work burnout levels than the Fulfilled profile at $p<.001$. Thus Hypothesis 2a, 2b, 2c and 2d were supported.

6.5 Discussion

This study provides a more nuanced understanding of work-to-family experiences in sole and partnered working mothers. The results indicated five distinct profiles reflecting different combinations of WFC and WFE: (1) high WFC/high WFE (Active); (2) high WFC/low WFE (Harmful); (3) high WFC/low to medium WFE (Negative Active); (4) low WFC/high WFE (Beneficial); and (5) low WFC/very high WFE (Fulfilled). Even though work-

to-family profiles have not been examined in a sample comprised solely of employed mothers, the nature of identified profiles is somewhat consistent with previous findings. In particular, three of the five profiles in the present study (Harmful, Beneficial, and Active) are similar to those reported by Rantanen *et al.* (2013) in a sample comprising 88% women employees. Consistent with Rantanen *et al.* (2013) we did not observe a Passive profile. It is possible that the absence of a Passive profile in employed mothers reflects a greater permeability between work and family roles for women than men, which can have detrimental outcomes, such as being disruptive to family life (Ventura, 1995). In contrast to Rantanen *et al.* (2013), we identified two additional profiles – Fulfilled and Negative Active. These profiles, as discussed below, shed new light on the nature of work-to-family profiles in working mothers.

Two of our identified profiles - Beneficial and Fulfilled – were characterized by high WFE combined with low WFC. The Beneficial profile is similar to combinations identified in previous research (e.g., Grzywacz *et al.*, 2008; Rantanen *et al.*, 2011; Rantanen *et al.*, 2013). Although having a similar pattern, the Fulfilled profile had substantially higher scores on items relating to fulfilment, than for other WFE items. It is possible that for a subgroup of mothers work promotes greater psychosocial resources that aid functioning in the family role (Carlson *et al.*, 2006).

Two profiles also had a co-occurrence of high WFE/high WFC (Active and Negative Active). The presence of these two profiles aligns with Rantanen *et al.*'s (2013) claim that many women experience a higher permeability between work and family life than men, resulting in both higher WFC and higher WFE. Although, the Active and Negative Active profiles were similar, the Negative Active profile had lower scores on items relating to positive affect (e.g. work puts me in a good mood). Overall, these results suggest that work-to-family experiences in employed mothers are complex, and could manifest in different combinations of WFC and WFE.

Differences in profile membership

As hypothesized, we observed differences in profile membership between sole and partnered mothers. Consistent with hypotheses 1a and 1b, compared to partnered mothers, sole mothers were more likely to belong to the Harmful profile, and less likely to belong to the Beneficial profile. This paper did not explicitly examine levels of personal resources. However, we observed that sole mothers had lower incomes and longer work hours compared with partnered mothers. Although more research is required, it is plausible that these differences reflect that sole mothers have fewer resources (Hobfoll 2001). According to COR theory, this could mean that sole mothers are more vulnerable to harmful work-to-family experiences. This is a tentative conclusion, and we recommend that further research

be conducted examining factors such as work hours, and investigating the extent to which resource gains and losses underlie these differences.

Work-to-family profiles and burnout

Finally, we found that levels of burnout differed significantly between work-to-family profiles, supporting hypotheses 2a, 2b, 2c, and 2d. An important finding was that burnout was lower in the Active profile than the Harmful and Negative Active profiles despite the Active profile having higher or similar WFC levels. That is, higher levels of WFE in the Active profile appeared to buffer against the adverse effects of WFC, and protect against burnout (Greenhaus and Powell, 2006; Hobfoll, 2001). This is consistent with COR theory, and future research is needed to clarify whether access to certain resources in the Active profile are particularly important in buffering against WFC.

Implications

The present study makes several noteworthy contributions to the work- to-family literature, and there are a number of implications arising from the findings. First, this is the only known study to identify WFC and WFE profiles in employed mothers, and shows that the majority of mothers experience high WFC and high WFE simultaneously. This suggests many mothers are investing highly in both work and family domains (Rantanen *et al.*, 2013), and ongoing efforts are needed to reduce the demands on employed mothers. One approach is to make family leave more accessible to families, in particular paid maternity leave for working mothers.

This study also shows, for the first time, that sole mothers are more likely than partnered mothers to experience high WFC/low WFE simultaneously, which is also linked to higher levels of burnout. It is important to recognize that combining work and family differs between sole and partnered mothers. Furthermore, this study confirms that health outcomes differ across work-to- family profiles. Findings suggest that WFE may provide a buffering effect on WFC, thus greater efforts are needed to ensure WFE is promoted particularly in cases where there is difficulty reducing WFC due to the nature of the work role. Finally, the findings of this study suggest that fathers take more of the parenting and household responsibilities for partnered mothers. For sole mothers, there is a need for more diverse and original approaches to supporting them in combining parenting and paid employment. There is a clear need for further research to to identify supports that would benefit sole mothers.

Limitations and future studies

This study is limited by a cross-sectional design, thus only associations, and not predictions, can be determined. Additionally, the non-experimental design does not allow for

causality to be determined. Future research using a longitudinal design is recommended. Future studies might identify profiles using bi-directional, rather than unidirectional, work-family measures in working mothers. Because the scales used to identify profiles had more WFE items than WFC items, it is plausible that the profiles more heavily reflect WFE. We therefore recommend that future research use similar length scale for WFC and WFE. Furthermore, due to the recruitment method used, the sample sizes of sole and partnered mothers differ, and future research may wish to repeat the study using similar sample sizes. Finally, the sample included highly educated Australian mothers, which limits generalizability. Future research should also be carried out to establish whether work-to-family profiles differ across other family types such as sole and partnered fathers, stepfamilies, elder caregivers, and grandparents raising grandchildren.

6.6 Conclusion

The present findings suggest that mothers commonly experience high WFC and WFE simultaneously, and that sole mothers are at greater risk of harmful work-to-family conflict and enrichment profiles, which may further perpetuate the disadvantages facing this group of employees. It is important that future research expands on this study and identifies work-to-family profiles in other family types in order to support positive outcomes for individuals combining work and family.

6.7 References

- ABS. (2013), "Socio-Economic Indexes for Areas", Census, 2013, from <http://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa>.
- ABS. (2014), "Gender Indicators, Australia, August 2014", (4125.0), Australian Government, Canberra.
- ABS. (2015), "Household Family Projections, Australia, 2011 to 2036", (3236.0), Canberra: Australian Government.
- Allen, T. Herst, D. E. Bruck, C. S. and Sutton, M. (2000), "Consequences associated with work-to-family conflict: a review and agenda for future research", *Journal of Occupational Health Psychology*, Vol.5 No.2, pp.278-308.
- Bauer, D. J. and Curran, P. J. (2004), "The integration of continuous and discrete latent variable model opportunities", *Psychological Methods*, Vol.9 No.1, pp.3-29.
- Berlin, K. S. Williams, N. A. and Parra, G. R. (2014), "An introduction to latent variable mixture modeling (Part 1): Overview and cross-sectional latent class and latent profile analysis", *Journal of Pediatric Psychology*, Vol.39 No.2, pp.174-87.
- Carlson, D. S. Kacmar, K. M. Wayne, J. H. and Grzywacz, J. G. (2006), "Measuring the positive side of work-family interface: Development and validation of a work-family enrichment scale", *Journal of Vocational Behaviour*, Vol.68 No.1, pp.131-64.
- Demerouti, E. and Geurts, S. (2004), "Towards a typology of work-home interaction", *Community, Work and Family*, Vol.7 No.3, pp.285-309.
- Dziak, E. Janzen, B. L. and Muhaarine, N. (2010), "Inequalities in the psychological well-being of employed single and partnered mothers: the role of work quality and work-family conflict", *International Journal for Equity in Health*, Vol.9 No.6, pp.1-8.
- Goodman, L. A. (1961), "Snowball sampling", *Annals of Mathematical Statistics*, Vol.32 No.1, pp.148-70.
- Grandey, A. and Cropanzano, R. (1999), "The Conservation of Resources Model applied to work-family conflict and strain", *Journal of Vocational Behaviour*, Vol.54 No.2, pp.350-70.
- Greenhaus, J. H. and Beutell, N. J. (1985), "Sources of conflict between work and family roles", *The Academy of Management Review*, Vol.10 No.1, pp.76-88.
- Greenhaus, J. H. and Powell, G. N. (2006), "When work and family are allies: A theory of work-family enrichment", *Academy of Management Review*, Vol.31 No.1, pp.72-92.
- Grzywacz, J. G. Butler, A. B. and Almeida, D. M. (2008), "Work, family and health: Work-family balance as a protective factor against stresses of daily life" in Marcus-Newhall, A. Halpern, D.F. and Tan, S.J. (Eds.), *The Changing Realities of Work and Family: A*

- Multidisciplinary Approach Oxford, Wiley- Blackwell, UK, pp.194-215.
- Grzywacz, J. G. and Marks, N. F. (2000), "Reconceptualising the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family", *Journal of Occupational Health Psychology*, Vol.5 No.1, pp.111-26.
- Hobfoll, S. E. (2001), "The influence of culture, community, and the nested-self in the stress process: advancing conservation of resources theory", *Applied Psychology: An International Review*, Vol.50 No.3, 337-421.
- Hobfoll, S. E. and Shirom, A. (2001), "Conservation of resource theory: Applications to stress and management in the workplace" in Golembiewski, R.T. (Eds.), *Handbook of Organizational Behaviour*, 2nd ed., Dekker, New York.
- IBM Corp (2010), *IBM SPSS Statistics for Windows*, Version 19.0. Armonk, NY: IBM Corp.
- Innstrand, S. T. Melbye Langbelle, E. Arild Espnes, G. and Gjerlow Aasland, O. (2008), "Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations", *Work and Stress*, Vol.22 No.1, pp.1-15.
- Innstrand, S. T. Melbye Langbelle, E. Arild Espnes, G. Gjerlow Aasland, O. and Falkum, E. (2010), "Work-home conflict and facilitation across four different family structures in Norway", *Community, Work and Family*, Vol.13 No.2, pp.231-49.
- Jarvisalo, J. Andersson, B. Boedeker, W. and Houtman, I. L. D. (2005), "Mental Disorders as a Major Challenge in Prevention of Work Disability", Kela, Helsinki.
- Kristensen, T. S. Borritz, M. Villadsen, E. and Christensen, K. B. (2005), "The Copenhagen Burnout Inventory: a new tool for the assessment of burnout", *Work and Stress*, Vol.19 No.3, pp.192-207.
- Magee, C. A. Stefanic, N. Caputi, P. and Iverson, D. C. (2012), "The association between job demand/control and health in employed parents: The mediating role of work-to-family interference and enhancement", *Journal of Occupational Health Psychology*, Vol.17 No. 2, pp.196-205.
- Marsh, H. W. Ludtke, O. and Trautwein, U. (2009), "Classical latent class profile analysis of academic self-concept dimensions: Synergy of Person- and Variable-Centered approaches to theoretical models of self-concept", *Structural Equation Modeling*, Vol.16 No.2, pp.191-225.
- Mauno, S. Rantanen, J. and Kinnunen, U. (Eds.), (2011), "Work-family balance and its correlates among Finnish academic professionals: Profiling the experiences of work-family conflict and enrichment", Metropolis-Verlag: Marburg.
- McNall, L. A. Nicklin, J. M. and Masuda, A. D. (2010), "A meta-analytic review of the consequences associated with work-family enrichment", *Journal of Business Psychology*, Vol.25 No.3, pp.381-96.
- Muthen, L. K. and Muthen, B. O. (1998-2015), *Mplus User's Guide*, (Seventh ed.), Muthen

- and Muthen, Los Angeles, CA.
- Netemeyer, R. G. Boles, J. and McMurrian, R. (1996), "Development and validation of work-family conflict and family-work conflict scales", *Journal of Applied Psychology*, Vol.81 No.4, pp.400-410.
- Nylund, K. L. Asparouhov, T. and Muthen, B. O. (2007), "Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study", *Structural Equation Modeling*, Vol.14 No.4, pp.535-69.
- OECD. (2014), "OECD Family Database", Paris: OECD. Retrieved from <http://www.oecd.org/social/family/database>.
- Rantanen, J. Kinnunen, U. Mauno, S. and Tement, S. (2013), "Patterns of conflict and enrichment in work-family balance: A three-dimensional typology", *Work and Stress*, Vol.27 No.2, pp.141-63.
- Rantanen, J. Kinnunen, U. Mauno, S. and Tillemann, K. (2011), "What is work-life balance? A glance at the theoretical background", in Kaiser, S. et al. (Eds.), *Introducing theoretical approaches to work-life balance and testing a new typology among professionals*, Springer, Berlin.
- Rantanen, J. Kinnunen, U. and Pulkkinen, L. (2013), "The role of personality and role engagement in work-family balance", *Horizons of Psychology*, Vol.22, pp.14-26.
- Shirom, A. (Ed.), (1989), *Burnout in Work Organisations*, Wiley, New York.
- Ventura, M. (1995), "The age of interruption", *Family Therapy Networker*, Vol.19 No.4, pp.19-31.
- Wayne, J. H. Grzywacz, J. G. Carlson, D. S. and Kacmar, K. M. (2007), "Work-family facilitation: A theoretical explanation and model of primary antecedents and consequences", *Human Resource Management Review*, Vol.17 No.1, pp.63-76.

CHAPTER 7: SUMMARY AND CONCLUSION

Summary and Conclusion

The present thesis aimed to investigate work-family conflict (WFC) and work-family enrichment (WFE) in sole working mothers and implications for health and burnout, with comparisons to partnered working mothers. This chapter summarises the major findings of the present research, presents limitations and suggestions for further research areas, and discusses key contributions and implications.

7.1 Summary

This thesis began with a systematic review of literature on WFC and WFE in working mothers. In doing so, the first paper (Chapter 2) provided an overview of the limited literature in this area, and identified a need for a sound theoretical framework to guide research comparing between sole and partnered mothers. It was recommended that future research utilise the Conservation of Resources (COR) theory (Hobfoll, 1989) as the conceptual framework to guide and understand differences between sole and partnered mothers in WFC and WFE. This chapter also developed six research propositions on how the work-family interface may differ in sole mothers to partnered mothers, why potential differences may exist, and how these differences may underlie health outcomes using the COR theory (Hobfoll, 1989) as a framework.

The first empirical paper (Chapter 3) sought to clarify whether sole and partnered mothers differed in relation to mental and physical health. In addition, Chapter 3 examined whether two resources – social support and work hours – accounted for these differences. The findings indicated poorer physical and mental health in sole working mothers than partnered working mothers, consistent with past research showing health inequalities between sole and partnered mothers (Burstrom, Whitehead, Clayton, Fritzell, Vannoni & Costa, 2010). Additionally, low social support levels seemed to increase vulnerability to poor mental health in sole mothers compared to partnered mothers, and this is concerning as sole mothers tend to have lower social support. Contrary to expectations, longer work hours were related to improved physical health in sole working mothers.

In order to provide more detailed insight into the health of working mothers, the next chapter (Chapter 4) examined burnout (personal and work) and also compared relationships between WFC and WFE and burnout in sole and partnered mothers across two-time points. Findings indicated that WFC, WFE and burnout (both personal and work) were similar between mothers, suggesting that when resource levels are similar between sole and partnered mothers any differences in wellbeing are greatly reduced. However, differences between sole and partnered mothers were found in the relationship between personal

burnout and WFE. The effect of WFE on personal burnout was greater in partnered than sole mothers. Partnered mothers may apply work-related resource gains to the home domain more easily because of their greater resources levels. Consequently, sole mothers may then have greater vulnerability to personal burnout than partnered mothers.

Chapter 5 further explored the role of resources on WFC and WFE in working mothers by examining internal locus of control, or internality, and WFC and WFE across two-time points. This study showed that the relationship between internality and WFE was stronger for sole than partnered mothers. Findings suggest that internality is a crucial asset for sole working mothers, and this study enhances our understanding of how resources can influence the work-family interface in sole working mothers.

Chapter 6 built on the findings of previous chapters by investigating relationships between WFC and WFE with burnout using a person-centred approach. This involved identifying distinct work-family combinations, or profiles, based on WFC and WFE levels in the sample of working mothers. Results supported five distinct work-family profiles, and in a noteworthy contribution, the findings indicated significant differences in work-family profiles between sole and partnered mothers. For instance, a Harmful profile, that is high WFC and low WFE, was more common in sole working mothers than partnered working mothers, who were more likely to be in a profile low in WFC and high in WFE (a Fulfilled or Beneficial profile). This finding is consistent with past studies showing differences in profile membership based on marital status (Rantanen, Kinnunen, Mauno, & Tement, 2013). This novel finding shows that a person-centred approach can provide additional important insights into the work-family interface, and complements the more common variable-centred approach used in the work-family literature (Rantanen et al., 2013).

Chapter 6 also provided insight into the relationships between work-family profiles and burnout in working mothers. The identified work-family profiles differed in burnout levels, consistent with past research that showed differences in psychological strain and job exhaustion, across work-family profiles (Demerouti & Geurts, 2004; Rantanen et al., 2013). Findings also indicated that sole mothers were more likely to be in the profile with the highest levels of burnout, which suggests sole mothers' work-family combinations could increase their vulnerability to poor outcomes.

7.2 Practical contributions and implications of the thesis

The findings of this thesis raise serious questions about the current approach to work-family policies that adopt universal solutions for all working mothers (Darcy, McCarthy, Hill & Grady, 2012), and could be of great interest to policy makers and government, organisations and managers, and to working mothers. This thesis argues that sole mothers

have unique needs in combining work and family, and raises the question as to what is being done to reduce the greater risk of vulnerability of sole working mothers to harmful work-family combinations and poorer physical and mental health. Possible strategies include raising awareness of the lower resources of sole mothers in general in comparison to partnered mothers, as well as the important role of resources in meeting the demands of work and family. Other approaches include building social support networks in the workplace as a means of increasing WFE and health (Baral & Bhargava, 2010; Siu, Lu, Brough et al., 2010). This may require changes to the informal work culture, and these changes may be best approached by small incremental changes over time (Callan, 2007). Improving integration of work and life integration through interventions are typically adopted through organisational development initiatives and human resource policies (Brough & O'Driscoll, 2010). Expanding these approaches to include professional development is a means to increasing resources, such as skill advances and a sense of accomplishment, which could lead to WFE.

It is also paramount that mothers themselves are aware of the role of resources and are encouraged to be proactive in acquiring additional resources, such as attending networking functions to build social support or professional development courses to increase skills and career advancement opportunities. Furthermore, this thesis suggests that sole mothers with internality may use more proactive approaches to both gaining resources, and managing potential conflicts of work and family. Correspondingly, those mothers with low internality will need additional support and training to develop skills in becoming more proactive. Although the abovementioned approaches are truly worthwhile, it would be remiss not to note the inherent difficulties of implementing changes to policies, or with work-family policies already in place. Governments, for instance, have a key role in influencing policy, and policy changes (Baird, 2011), although previous approaches to reform aimed at easing the pressures on working mothers, for example, paid parenting leave, in the Australian context has been contested (Gregory, Milner, Windebank, Pocock, Charlesworth, & Chapman, 2013; Pocock, Charlesworth & Chapman, 2013). In some instances, it has been argued that some work-family policies serve only to reinforce the caregiving role of women and thereby increase the risk of poverty, particularly for sole mothers (Misra, Moller, & Budig, 2007). For instance, in France and Belgium policy packages provide high levels of support for women's caregiving during children's younger years, via forms of carer's leave. However this approach fosters the role of women as carers and is linked to higher poverty for sole mothers (Misra et al., 2007). On the other hand, countries such as Finland and Norway, take a different strategy with policies that subsidize childcare facilities and encourage men to do more caregiving (Misra et al., 2007). These approaches are linked to lower poverty for mothers, and especially for sole mothers (Misra et al., 2007).

One of the issues that is often discussed in regards to policy on work requirements for sole mothers is whether they should be mandated to enter the paid workforce when their children are of a certain age. Based on the research from this thesis it is difficult to ascertain whether this should be the case. However, findings from this thesis raise some important points that contribute to the debate. First, combining work and family roles with few resources available, as is often the case for sole mothers, can be detrimental to the health and functioning of working mothers. On the other hand, work can provide women with resources, which then have a positive impact on their work, supporting work as an important component in improving functioning and wellbeing. Thus, continued efforts are needed to implement policies to make resources, such as flexible working conditions, affordable child care, and training opportunities, more accessible to sole mothers to support them to engage in paid employment, while minimising potential detrimental effects associated with lower resource levels. There has been much debate about whether the age of the child should be considered in policies requiring sole mothers to enter paid work. Findings from this research and in past studies (e.g. Dziak et al., 2010, Grzywacz & Marks 2000, Nicklin & McNall 2011) show an inverse relationship between age of youngest child and WFC, and positive relationship between age of youngest child and WFE. The effect of the child's age may not be as pronounced when mothers have abundant resources, however this is not yet clear. Regardless, there is evidence that the age of the youngest child impacts on the work-family interface and outcomes of working mothers and is an important consideration for policy makers.

Finally, it is important to note that any changes within, or outside of, organisations can be reliant to some extent on the economy, with good economic times precursors to work-family advances being embraced (Gregory et al., 2013). Accordingly, it is clearly evident that there are great challenges facing our modern society in facilitating mothers in the workforce, and reducing the poverty risks of sole working mothers. However, this thesis shows a number of areas in which policies can target and thus make an important contribution to the literature.

7.3 Theoretical contributions and implications of the thesis

The evidence from this thesis research strongly supports COR theory (Hobfoll, 1989) as a comprehensive theoretical framework for exploring and understanding the differences between sole and partnered mothers, and the role of resources on the work-family interface. In a unique contribution to the literature, COR theory (Hobfoll, 1989) was applied to exploring and understanding differences between sole and partnered mothers in WFC, WFE and burnout based on resource inequalities between mothers. It was argued that sole

mothers have different experiences of the work-family interface and health outcomes due to their lower resources levels than partnered mothers. Lower resources translated into vulnerability to resource loss and burnout consistent with COR's assertion that resource loss begets further loss (Hobfoll, 1989). The co-existence of WFC and WFE was clearly evident, supporting past propositions (Grzywacz & Marks, 2000), and distinct combinations of WFC and WFE levels were identified in working mothers. This was evident in the finding of work-family profiles and burnout where the high WFC/low WFE combination had the higher personal burnout levels and the greatest proportion of sole mothers than other work-family profiles. The current research supports the COR theory proposition that gains beget gains, through the finding that partnered mothers' gains in the form of WFE had a greater impact on personal burnout levels than did gains by sole mothers, with fewer resources (Hobfoll, 2001). Also, findings from this thesis research support the greater saliency of resource gains following loss, as shown by the finding that there is a greater influence of internality on WFE in sole than partnered mothers.

Even though the COR provided a useful theoretical foundation for the present thesis, it is not without limitation. Findings of this thesis suggest that some resources are more important than others depending on situational context; in some cases, resources improved outcomes for sole mothers but not partnered mothers and vice versa. For instance, the findings in Chapter 3 showed that full-time work, compared to part-time work, was associated with greater physical health in sole mothers. Even though it is not possible to know with certainty which resources associated with long work hours are influencing physical health, these resources do not appear to have the same influence on partnered working mothers as there was little difference in physical health across work hours.

Another resource that influenced sole mothers but not partnered mother was internality or an internal locus of control. The influence of internality on WFE was significant for sole mother but not partnered mothers again suggesting that the resource of internality is key for sole but not partnered mothers. There were also no differences in the influence of resources on WFC between mothers. On the other hand, other resources had an important effect for sole but not partnered mothers. For instance, the influence of WFE on burnout had a much greater effect for partnered than sole mothers, suggesting resources associated with WFE may not be as important for sole than partnered mothers. There were also no differences in the influence of resources on WFC between mothers; this finding may suggest that there are no differences between sole and partnered mothers, or that other resources not included in this thesis may have a role. Accordingly, not all resources are of equal value when considering the influence of resources on the work-family interface and health of working sole and partnered mothers. In order to support mothers in the workforce, more research is warranted to explore the nature of resources for working mothers based on

family structure. On the contrary, when considering work-family profiles based on WFC and WFE there were significant differences in profile membership between sole and partnered mothers, with sole mothers more likely to be in profiles high in WFC and low in WFE. This finding supports the greater risk of resource loss, and less potential for gains in those with fewer resources, that is sole mothers, in line with COR theory (Hobfoll, 1989).

Threats of resource loss leads to stress in a similar manner to actual losses of resources in line with COR theory (Hobfoll, 1989). There are potentially more threats to resource losses for sole than partnered mothers given their lower resource levels including have poorer health, greater housing instability and financial stress (Cairney et al., 2003). The influence of threats of resource loss on the work-family interface and health outcomes is not clear and needs to be examined. Additionally, sufficient resources are critical to resource investment. In order to gain further resources there must be sufficient investment. For instance, to gain a promotion that brings with it greater job flexibility, job autonomy and income, there needs to be resources, such as sufficient time and child care, available to work towards the promotion. There are instances where resources are invested and there is little or no return, such as working towards a promotion and then not receiving the promotion. The effects of a lack of return on investment is to increase stress and drain resources, similar to when resources are lost or there is a threat of a loss of resources. A lack of investment on resources is then detrimental to working mothers. This thesis does not study this aspect of resources and future research testing whether the detrimental effects of a lack of return on investment is the same for sole and partnered mothers is suggested. Finally, the individualistic nature of COR theory limits its applicability because the broader social and policy context within which mothers' make decisions on working are not considered. The Work-Home Resources Model (ten Brummelhuis & Bakker, 2012) based on COR theory (Hobfoll, 1989) considers macro resources or the "larger economic, social and cultural systems individuals are part of" (ten Brummelhuis & Bakker, 2012, p548), and further research might explore the work-family interface of working mothers within this framework.

7.4 Limitations and future directions

This research has a number of limitations including the high education levels of mothers in the sample compared to the Australian general population, which was a by-product of the recruitment method. Whilst the two-wave studies are superior to cross-sectional approaches, additional time-points would prove more insightful. As a result of this thesis, further research might well be conducted in order to determine whether differences

also exist between other family types, or between divorced and single but never married mothers. Further research should be carried out to establish the role of other resources, such as non-work social support, job autonomy and extraversion on the work-family interface, and whether these are more salient for sole working mothers or partnered working mothers. This thesis draws attention to how little WFE is studied in comparison to WFC, although research on WFE has grown, more is still needed, particularly as it was clearly established that WFE has a role in managing burnout even when conflicts are present. This is a key point arising from the research because some occupations are limited in being able to reduce WFC, such as shift workers or those who are client-based. Findings from the present thesis suggest that fathers may take more of the parenting responsibilities and load at home for partnered mothers, and that more diverse and original solutions are needed to support sole mothers in paid employment. Future research identifying supports that benefit sole mothers is clearly needed. Finally, it is suggested that associations between the work-family interface and other health and organisational outcomes are examined to test for differences in sole mothers compared to partnered mothers.

7.5 Conclusion

This thesis addresses a major gap in the work-family literature by investigating the work-family interface in sole working mothers and implications for their health through comparisons with partnered working mothers. Even though substantial advances have been made in understanding and developing work-family policies and research over recent decades, by almost exclusively focusing on mothers in the dual-parent family researchers and policy makers has neglected to consider the needs of sole working mothers. As such, issues facing working mothers are not being approached in the most effective manner. In attempting to address these issues, this thesis makes an original contribution to knowledge by identifying differences in the work-family interface and associations with health outcomes in sole working mothers compared to partnered working mothers. This novel research provides a basis for future work-family research on diverse family types, and has the potential to guide new and inclusive work-family strategies. Such approaches are crucial because managing the work-family interface as a sole mothers is an issue that a great many women will continue to face well into the future.

7.6 References

- Baird, M. (2011). The state, work and family in Australia. *The International Journal of Human Resource Management*, 22(18), 3742-3754.
- Baral, R., & Bhargava, S. (2010). Work-family enrichment as a mediator between organizational interventions for work-life balance and job outcomes. *Journal of Managerial Psychology*, 25(3), 274-300.
- Brough, P., & O'Driscoll, M. P. (2010). Organizational interventions for balancing work and home demands: An overview. *Work & Stress*, 24(3), 280-297.
- Burstrom, B., Whitehead, M., Clayton, S., Fritzell, S., Vannoni, F., & Costa, G. (2010). Health inequalities between lone and couple mothers and policy under different welfare regimes - The example of Italy, Sweden and Britain. *Social Science & Medicine*, 70(6), 912-920.
- Callan, S. (2007). Implications of family-friendly policies for organizational culture: Findings from two case studies. *Work, Employment and Society*, 21(4), 673-691.
- Cairney, John, Boyle, Michael, Offord, David R., & Racine, Yvonne (2003). Stress, social support and depression in single and married mothers. *Social Psychiatry and Psychiatric Epidemiology*, 38, 442-449.
- Craig, Lyn & Mullan, Killian (2010). Parenthood, gender and work-family time in USA, Australia, Italy, France and Denmark, *Journal of Marriage and Family* 72(5), 1344-1361
- Darcy, C., McCarthy, A., Hill, J., & Grady, G. (2012). Work-life balance: One size fits all? An exploratory analysis of the differential effects of career stage. *European Management Journal*, 30(2), 111-120.
- Demerouti, E., & Geurts, S. (2004). Towards a typology of work-home interaction. *Community, Work and Family*, 17(3), 285-309.
- Doss, B. D., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2009). The Effect of the Transition to Parenthood on Relationship Quality: An Eight-Year Prospective Study. *Journal of Personality and Social Psychology*, 96(3), 601-619.
- Gregory, A., Milner, S., Windebank, J., Pocock, B., Charlesworth, S., & Chapman, J. (2013). Work-family and work-life pressures in Australia: Advancing gender equality in "good times"? *International Journal of Sociology and Social Policy*, 33(9/10), 594-612.
- Grzywacz, J.G. & Marks, N.F. (2000). Reconceptualising the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, 5(1), 111-126.
- Hill, E. J. (2005). Work-family facilitation and conflict, working fathers and mothers, work-family stressors and support. *Journal of Family Issues*, 26(6), 793-819.

- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualising stress. *American Psychologist*, 44(3), 513-524.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review*, 50(3), 337-421.
- Lawrence, E., Cobb, R. J., Rothman, A. D., Rothman, M. T., & Bradbury, T. N. (2008). Marital Satisfaction Across the Transition to Parenthood. *Journal of Family Psychology : JFP : Journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 22(1), 41–50.
- Misra, J., Moller, S., & Budig, M. J. (2007). Work-family policies and poverty for partnered and single women in Europe and North America. *Gender & Society*, 21(6), 804-827.
- Pocock, B., Charlesworth, S., & Chapman, J. (2013). Work-family and work-life pressures in Australia: advancing gender equality in “good times”? *International Journal of Sociology and Social Policy*, 33(9/10), 594-612.
- Rantanen, J., Kinnunen, U., Mauno, S., & Tement, S. (2013). Patterns of conflict and enrichment in work-family balance: A three-dimensional typology. *Work & Stress*, 27(2), 141-163.
- Siu, O. L., Lu, J. F., Brough, P., Lu, C. Q., Bakker, A. B., Kalliath, T., ... & Sit, C. (2010). Role resources and work-family enrichment: The role of work engagement. *Journal of Vocational Behavior*, 77(3), 470-480.
- Ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work-home interface: The work-home resources model. *American Psychologist*, 67(7), 545.

APPENDICES

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Appendix A. The 12th Australian Institute of Family Studies

Robinson, L.D, Caputi, P. & Magee, C. (July 2012). Sole working mothers health and work-family experiences. Australian Institute of Family Studies Conference. Paper presented at the *12th Australian Institute of Family Studies Conference*, Melbourne, Australia.

Abstract

Sole mothers experience poorer health compared to partnered mothers. However, little is known about the health of sole mothers in paid employment. Research supports associations between health and work and family experiences. The aim of this study is to examine associations between mental and physical health, work family experiences (work-family conflict, enhancement and balance), and social support in the sole mother population. Data from the Household Income and Labour Dynamics Australia (HILDA) are used to examine the influence of these factors on the health of sole working mothers; as assessed by the SF-36. Findings indicate that the mental and physical health of sole working mothers is significantly positively related to work-family enhancement, work-family balance and social support; and significantly negatively related to work-family interference. The health implications of these findings demonstrate the importance of developing and implementing strategies to improve work-family experiences and social support of sole mothers in paid employment. This is an important issue impacting on individuals, families and organisations particularly given the recent changes in global economy and employment opportunities, and the changing dynamics of families in Australia. Further studies will examine the complex interactions involved in balancing work and family roles in this population.

Appendix B. The 28th International Congress of Applied Psychology

Robinson, L.D., Magee, C.A. & Caputi, P. (July, 2014). Work-to-family enrichment and conflict: Differential influences on burnout in sole and partnered mothers. Paper presented at the 28th *International Congress of Applied Psychology*, Paris, France, July 2014

Abstract

Employee burnout is a major concern for individuals, as it has implications for their health and well-being (e.g., depression), and workplace productivity and safety. Sole working mothers appear particularly at risk of burnout, perhaps because they have limited access to resources (e.g., time, income, and social support) compared with partnered working mothers. This may lessen their capacity to adequately balance the often competing demands of work and family life, which could lead to burnout over time. Constructs such as Work-Family Conflict (WFC) and Work-Family Enrichment (WFE) could therefore explain the higher rates of burnout in sole working mothers. For instance, according to the Conservation of Resources (COR) theory, an individual with limited resources is susceptible to further resource loss, which can promote WFC. Therefore, sole mothers may be at greater risk of WFC because they have fewer resources, which could lead to burnout over time. COR also proposes that individuals who have more resources, are more likely to gain further resources, which could promote WFE. It is feasible that sole mothers experience less WFE, which also increases their risk of burnout. Therefore this study aims to clarify whether the differing levels of burnout in sole and partnered mothers is explained by WFC and WFE.

Data were collected from 99 sole and 492 partnered working mothers at two time points, six months apart, using an online survey. WFC predicted higher work, personal and total burnout, and these effects did not differ significantly between sole and partnered mothers. WFE predicted lower work and total burnout, and the magnitude of these associations were more pronounced in sole working mothers. This study shows that WFE has a greater influence on burnout in sole than partnered mothers. It is proposed that resources are more highly valued by sole mothers so when WFE is lower they are less able to balance work and family demands and are more vulnerable to burnout (and vice-versa). Implementing strategies to promote WFE (e.g., increasing co-worker social support or job autonomy) by improving access to resources in the workplace) will improve health outcomes for sole working mothers and will also benefit organisations. Further research is needed on the work-

family interface and burnout, particularly in sole working mothers.

Appendix C. The 11th Industrial and Organisational Psychology Conference

Robinson, L.D., Magee, C.A. & Caputi, P. (2015). Work-to-family conflict and enrichment profiles, family types and wellbeing in working mothers. *11th Industrial and Organisational Psychology Conferences*, Melbourne, July, 2015.

Abstract

Aim: Researchers are increasingly using a person-centred approach to investigate distinct combinations of work-family conflict (WFC) and work-family enrichment (WFE) in employees. This research shows that combinations have important health implications. Yet, profiles have not been identified in a sample of working mothers. Using the Conservation of resources and Resource Gains-Development theories, this study aims to identify distinct work-family profiles in working mothers, examine whether profiles differ between sole and partnered mothers, and whether profiles differ in psychological distress and quality of life. **Design Survey:** Cross-sectional data on WFC, WFE, burnout, and relevant socio-demographic covariates were collected via a self-report online survey. **Method:** The sample included 179-sole and 857-partnered Australian mothers who were in paid employment and had a dependent child. Analysis first involved Latent Profile Analysis (LPA) in Mplus to identify distinct profiles. Then using general linear models, differences between groups of mothers were tested, followed by relationships between profiles and distress and QOL. **Results:** Five distinct work-to-family profiles were identified: Fulfilled (low WFE/very high WFE), Beneficial (low WFC/high WFE), Active (high WFC/WFE), Negative Active (high WFC/mid WFE), and Harmful (high WFC/low WFE). Sole mothers were significantly more likely to belong to the Harmful profile. Profiles also differed significantly in health outcomes. Psychological distress was the highest, and quality of life was the lowest, in the Harmful profile. Whilst in the Fulfilled profile psychological distress was the lowest, and quality of life the highest. **Conclusion:** A limitation is the cross-sectional nature of this study, however this is the first known study to identify work-to-family profiles in a sample of working mothers. It shows support for distinct combinations of WFC and WFE in mothers and that health differs across combinations. Furthermore, findings demonstrate the importance of considering family structure, and that some groups of employees are at-risk of adverse combinations of WFC and WFE. Organisations might use profile information to tailor work-family strategies, and to identify employees at risk, such as sole mothers and those in a Harmful profile. Taking this approach may contribute to improved employee health and organisational productivity.

Appendix D: UOW Human Ethics Research Approval



APPROVAL after review
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University of Wollongong NSW 2522

Dear Ms Robinson

Thank you for your letter responding to the HREC review letter. I am pleased to advise that the Human Research Ethics application referred to below has been **approved**.

Ethics Number:	HE12/158
Project Title:	Sole working mothers and psychological distress: the role of work-family balance
Researchers:	Ms Laura Robinson, A/Professor Peter Caputi, Dr Christopher Magee
Approval Date:	12 July 2012
Expiry Date:	11 July 2013

The University of Wollongong/Illawarra Shoalhaven Local Health District Social Sciences HREC is constituted and functions in accordance with the NHMRC National Statement on Ethical Conduct in Human Research. The HREC has reviewed the research proposal for compliance with the National Statement and approval of this project is conditional upon your continuing compliance with this document.

A condition of approval by the HREC is the submission of a progress report annually and a final report on completion of your project. The progress report template is available at <http://www.uow.edu.au/research/rso/ethics/UOW009385.html>. This report must be completed, signed by the appropriate Head of School, and returned to the Research Services Office prior to the expiry date.

As evidence of continuing compliance, the Human Research Ethics Committee also requires that researchers immediately report:

- proposed changes to the protocol including changes to investigators involved
- serious or unexpected adverse effects on participants
- unforeseen events that might affect continued ethical acceptability of the project.

Ethics Unit, Research Services Office
University of Wollongong NSW 2522 Australia
Telephone (02) 4221 3386 Facsimile (02) 4221 4338
Email: rso-ethics@uow.edu.au Web: www.uow.edu.au

Please note that approvals are granted for a twelve month period. Further extension will be considered on receipt of a progress report prior to expiry date.
If you have any queries regarding the HREC review process, please contact the Ethics Unit on phone 4221 3386 or email rso-ethics@uow.edu.au.

Yours sincerely,

A/Professor Garry Hoban
Chairp, Social Sciences
Human Research Ethics Committee

cc: A/Professor Peter Caputi, School of Psychology

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Appendix E: Participant Information Sheet



TITLE: Sole working mothers and psychological distress: the role of work-family balance

Ms Laura Robinson (laurar@uow.edu.au)

A/Prof Peter Caputi

Dr Christopher Magee

PURPOSE OF THE RESEARCH

This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The purpose of this research is to investigate challenges sole working mothers experience in their roles of parent and paid employee. This will focus on issues relating to work-family balance, and will also investigate the implications on health, well-being, and family functioning. This research will be conducted in the School of Psychology at the University of Wollongong.

METHOD AND DEMANDS ON PARTICIPANTS

If you choose to participate in this study, you will be asked to complete an online survey (administered via Survey Monkey). This survey will take approximately 30 minutes to complete, and will include questions relating to family experiences, work experiences, family and work demographics and levels of satisfaction.

You will be invited to complete the survey a second time six months after the initial recruitment. In order to invite you to complete the survey a second time, a link at the end of the survey allows you to enter your email address. This data is kept separate from your results and you will not be able to be identified from this.

POSSIBLE RISKS, INCONVENIENCES AND DISCOMFORTS

This survey collects data about areas of your life that are considered sensitive. To develop our understandings of the psychological health of sole mothers, we will be asking you about your experiences of emotional distress, anxiety and depression, and feelings of worthlessness. Items include *during the past 30 days, about how often did you feel worthless/hopeless or nervous?* Other questions will ask you about your work experiences, such as job satisfaction, performance, and exhaustion from work. These items include *do you feel burnt out because of your work? promotions are given to those who perform well on the job and I often think about quitting.* Finally included are also items about the

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University of Wollongong NSW 2522 Australia
Telephone 02 4221 5035

laurar@uow.edu.au www.uow.edu.au CRICOS PROVIDER No. 00102E



relationships within your home such as how satisfied you are with *the degree of closeness between family members* and *the fairness of criticism in your family*.

These questions may promote emotional distress in some people. If you find that you are experience any feelings of distress arising from participation we encourage you to seek support. Available support may include talking to family and/or friends, your General Practitioner or health provider. Support and resources are also available from the following (24 hour services):

Lifeline	13 1114	www.lifeline.org.au
Parent Line	1300 130 052	www.paretline.org.au
Salvo Care Line	1300 363 622	www.salvos.org.au/salvocareline
Suicide Call Back Service	1300 659 467	www.suicidecallbackservice.org.au

ANTICIPATED USES/BENEFITS OF THIS RESEARCH

It is anticipated that this study will provide information about the experiences of sole mothers in balancing their work and family roles, as well as knowledge about how this impacts on their health. It is hoped that this information will form a basis from which these important issues can be addressed and the welfare of sole mothers and their children improved. It is expected that organisations will be advantaged from this study with information about improved work outputs.

Involvement in this research is voluntary, you are free to refuse to participate or, having consented, to withdraw your consent without refusal or withdrawal affecting your relationship with the University of Wollongong.

All information provided is confidential and participants' anonymity is maintained at all times. Data is de-identified as no one (including the researchers) will be able to determine who the participants are.

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DATA COLLECTION AND STORAGE

Data will be collected using the online data tool SurveyMonkey (www.surveymonkey.com.au). Data will be stored on password protected hard drive at the University. It is anticipated that information gathered from this study will be used in presentations, journal articles and the student researcher's thesis.

ETHICS REVIEW AND COMPLAINTS

This study has been reviewed by the Human Research Ethics Committee (Social Science, Humanities and Behavioural Science) of the University of Wollongong. If you have any concerns or complaints regarding the way this research has been conducted, you can contact the UoW Ethics Officer on (02) 4221 3386 or email rso-ethics@uow.edu.au.

If you have any further questions about this study please contact Ms Laura Robinson at laurar@uow.edu.au or 02 4221 5035.

Thank you for your interest in this study.

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Telephone 02 4221 5035
laurar@uow.edu.au www.uow.edu.au CRICOS PROVIDER No. 00102E

Appendix F. Email Invitation To Participate In Survey

Hello,

You are invited to participate in an online survey designed to examine sole working mothers' work and family experiences and psychological health. The project titled "Work-family experiences of sole working mothers: the role of personality and implications for psychological wellbeing" aims to examine the influence of individual characteristics, work-family interactions, work-family satisfaction and psychological wellbeing of sole mothers in paid employment.

If you are interested in participating please click on the link below which will direct you to the survey, which will take approximately 20 minutes to complete. Participation is voluntary and all data is completely anonymous; you have the option to withdraw at any stage until the final submit button is pressed. To thank you for your contribution, you can enter the draw to win your choice of an iTunes voucher, Coles/Myer Voucher or Woolworths voucher. To enter the draw, upon completing the survey you are invited to submit your contact details via a separate link.

Before making your **decision** to participate, please see the attached participant information sheet for researchers' contact details, **research method and demand on participants, confidentiality and other details**.

We would also like to invite you to complete a second survey identical to this one in six months so we can measure any changes over this time. The survey will ask for the last four digits of your mobile number to use as a unique code to match your data. In addition we ask that you forward on this email to other sole mothers in paid employment known to you.

Thank you

Appendix G. Survey

Working mothers, burnout and psychological distress: the role of work-family balance

Ms Laura Robinson (laurar@uow.edu.au), A/Prof Peter Caputi, and Dr Christopher Magee

Purpose of the research

This is an invitation to participate in a study conducted by researchers at the University of Wollongong. The purpose of this research is to investigate challenges working mothers experience in their roles as parent and paid employee. This will focus on issues relating to work-family balance, and will also investigate the implications on health, well-being, and family functioning. It will be conducted in the School of Psychology at the University of Wollongong.

By completing this survey, you can go into the draw to WIN 1 of 4 \$100 Coles/Myer gift vouchers.

Methods and demands on participants

If you choose to participate in this study, you will be asked to complete an online survey (administered via Survey Monkey). This survey will take approximately 30 minutes to complete, and will include questions relating to family experiences, work experiences, family and work demographics, and levels of satisfaction.

You will be invited to complete a third, and final, survey in six months. In order to invite you, you will be asked to enter your email address (optional). If you provide your email address it will be kept separate from your results and you will not be able to be identified from this. Furthermore, your email address will be stored securely at the University of Wollongong and will be permanently deleted after the third survey. You do not need to provide an email address to complete this survey.

Possible risks, inconveniences and discomforts

This survey collects data about areas of your life that are considered sensitive. To develop our understandings of the psychological health of mothers, we will be asking you about your experiences of emotional distress, anxiety and depression, and feelings of worth. Items include *"During the past 30 days, about how often did you feel worthless/hopeless or nervous?"* Other questions will ask you about your work experiences, such as job satisfaction, performance, and exhaustion from work. These items include *"Do you feel burnt out because of your work?"*, *"Promotions are given to those who perform well on the job"* and *"I often think about quitting"*.

These questions may promote emotional distress in some people. If you find that you are experiencing any feelings of distress arising from participation we encourage you to seek support. Available support may include talking to family and/or friends, your General Practitioner or health provider. Support and resources are also available from the following (24 hour services):

Lifeline 13 1114 www.lifeline.org.au

Parent Line 1300 130 052 www.paretline.org.au

Salvo Care Line 1300 363 622 www.salvos.org.au/salvocareline

Suicide Call Back Service 1300 659 467 www.suicidecallbackservice.org.au

Anticipated uses/benefits of this research

It is anticipated that this study will provide information about the experiences of mothers in balancing their work and family roles, as well as knowledge about how this impacts on their health. It is hoped that this information will form a basis from which these important issues can be addressed and welfare of mothers and their children improved. It is expected that organisations will be advantaged from this study with information about improved work outputs. Involvement in this research is voluntary, you are free to refuse to participate or, having consented, to withdraw your consent without refusal or withdrawal affecting your relationship with the University of Wollongong. All information provided is confidential and participants' anonymity is maintained at all times. Data is de-identified as no one (including the researchers) will be able to determine who the participants are.

Data collection and storage

Data will be collected using the online data tool SurveyMonkey (www.surveymonkey.com.au). Data will be stored on password protected hard drive at the University. It is anticipated that information gathered from this study will be used in presentations, journal articles and the student researcher's thesis.

Ethics review and complaints

This study has been reviewed by the Human Research Ethics Committee (Social Science, Humanities and Behavioural Science) of the University of Wollongong. If you have any concerns or complaints regarding the way this research has been conducted, you can contact the UoW Ethics Officer on (02) 4221 3386 or email rs0-ethics@uow.edu.au.

If you have any further questions about this study please contact Ms Laura Robinson at laurar@uow.edu.au or 02 4221 5035.

Thank you for your interest in this study.

- * 1. We are seeking working mothers with a dependent child under 25 years.

Please select an option below to participate in this survey or to exit.

☐ Yes, I consent to participate in this study. ☐ No thank you.

- * 2. Are you?

☐ Female ☐ Male

- * 3. How old is your youngest **dependent** child?

☐ My child(ren) is/are under 25 years ☐ All my children are 25 years and over

4. Please type your email address below. This is *optional*, however it allows us to invite you to complete the survey a third time, and final time, in 6 months; and to link the data between the surveys you have completed. Once your data has been linked, your email address will be permanently deleted.

- * 5. How many years have you worked in your current role?

* 6. Which of the following best describes your current level in the company?

- | | |
|--|--|
| <input type="radio"/> Not currently employed | <input type="radio"/> General staff member |
| <input type="radio"/> Manager | <input type="radio"/> Self employed |
| <input type="radio"/> Supervisor | <input type="radio"/> Full-time student |
| <input type="radio"/> Other (please specify) | |

* 7. Are you currently studying?

- ☐ Yes, full-time student ☐ Yes, part-time student ☐ No

* 8. How many hours do you work in a typical week (if you are not currently employed please enter '0')?

* 9. Would you prefer to work more or less than you do?

- ☐ Prefer more
- ☐ Prefer less
- ☐ I'm happy with my current hours

* 10. How many more hours would you prefer?

* 11. How many fewer hours would you prefer?

* 12. How many children do you have?

* 13. Of these children, how many reside with you?

* 14. What is the age of youngest resident child?

* 15. If your child has a non-resident parent, please indicate how much time they spend with them (if they do not, please select "Not applicable").

- | | |
|--|---|
| <input type="radio"/> Daily/weekly | <input type="radio"/> Once very 3 - 12 months |
| <input type="radio"/> Fortnightly | <input type="radio"/> Less than once a year/never |
| <input type="radio"/> Monthly | <input type="radio"/> Not applicable. In a married/defacto relationship with father |
| <input type="radio"/> Other (please specify) | |

* 16. Which of the following best describes your living situation?

- | | |
|---|--|
| <input type="radio"/> Yourself (and your children) | <input type="radio"/> Living with other relatives (and your children) |
| <input type="radio"/> Living with spouse (and your children) | <input type="radio"/> Living with other adults (and your children)(not a live-in relationship) |
| <input type="radio"/> Living with parents or grandparents (and your children) | |

* 17. Which of the following best describes your ethnicity or cultural background?

- ☐ Australian
- ☐ Other (please specify)

* 18. What is your country of birth?

- ☐ Australia
- ☐ Other (please specify)

* 19. What country do you currently live in?

- ☐ Australia
- ☐ Other

Other (please specify)

* 20. What is your postcode?

* 21. What is your age?

* 22. What is your highest level of education qualification?

- | | |
|---|--|
| <input type="radio"/> Did not finish high school | <input type="radio"/> Undergraduate degree |
| <input type="radio"/> High school | <input type="radio"/> Postgraduate degree |
| <input type="radio"/> Diploma/Trade Qualification | |

* 23. What is your total household annual income for the last financial year (including salary, child support, family assistance etc.?)

- ☐ 0 - \$18,200
- ☐ \$18,201 - \$37,000
- ☐ \$37,001 - \$80,000
- ☐ \$80,001 - \$120,000
- ☐ \$120,001 - \$180,000
- ☐ \$180,001 and over

* 24. What is your current marital status?

- | | |
|-------------------------------------|--|
| <input type="radio"/> Never married | <input type="radio"/> Separated but not divorced |
| <input type="radio"/> Married | <input type="radio"/> Divorced |
| <input type="radio"/> De facto | <input type="radio"/> Widowed |

The following questions relate to your health and life in general.

* 25. In general, you would say your health is:

- ☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

* 26. In general, how would you rate your overall quality of life?

- ☐ Excellent ☐ Very good ☐ Good ☐ Fair ☐ Poor

* 48. Is your work emotionally exhausting?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 49. Do you feel burnt out because of your work?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 50. Does your work frustrate you?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 51. Do you feel worn out at the end of the working day?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 52. Are you exhausted in the morning at the thought of another day of work?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 53. Do you feel that every working hour is tiring for you?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

* 54. Do you have enough energy for family and friends during leisure time?

☐ Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Never/almost never

For the following items please select the statement you agree with the most in each pair.

* 55. .

- ☐ a. Many of the unhappy things in people's lives are due to bad luck.
☐ b. People's misfortunes result from the mistakes they make

* 56. .

- ☐ a. One of the major reasons why we have wars is because people don't take enough interest in politics.
☐ b. There will always be wars, no matter how hard people try to prevent them.

* 57. .

- ☐ a. Without the right breaks one cannot be an effective leader.
☐ b. Capable people who fail to become leaders have not taken advantage of their opportunities.

* 58. .

- ☐ a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
- ☐ b. Getting a good job depends mainly on being in the right place at the right time.

* 59. .

- ☐ a. When I make plans, I am almost certain that I can make them work.
- ☐ b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

* 60. .

- ☐ a. In my case getting what I want has little or nothing to do with luck.
- ☐ b. Many times we might just as well decide what to do by flipping a coin.

* 61. .

- ☐ a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
- ☐ b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.

* 62. .

- ☐ a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
- ☐ b. There really is no such thing as "luck."

* 63. .

- ☐ a. In the long run the bad things that happen to us are balanced by the good ones.
- ☐ b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

* 64. .

- ☐ a. Many times I feel that I have little influence over the things that happen to me.
- ☐ b. It is impossible for me to believe that chance or luck plays an important role in my life.

* 65. .

- ☐ a. What happens to me is my own doing.
- ☐ b. Sometimes I feel that I don't have enough control over the direction my life is taking.

For the questions below, please consider how you have felt during the past 30 days.

* 66. During the past 30 days, about how often did you feel ...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
... nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... hopeless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... restless or fidgety?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... so depressed that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... that everything was an effort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... worthless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the questions below, please check the box with the answer that comes closest.

* 67. My job requires that I learn new things.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 68. My job invokes a lot of repetitive work.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 69. My job requires me to be creative.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 70. My job allows me to make a lot of decisions on my own.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 71. My job requires a high level of skill.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 72. On my job, I have very little freedom to decide how I do my work.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 73. I get to do a variety of different things on my job.

☐ Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree

* 74. I have an opportunity to develop my own special abilities.

☐ Strongly disagree ☐ Disagree ☐ Agree ☐ Strongly agree

* 75. I have a lot of say about what happens on my job.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 76. My job requires working very fast.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 77. My job requires working very hard.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 78. I am not asked to do an excessive amount of work.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 79. I have enough time to get the job done.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 80. I am free from conflicting demands that others make.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 81. My tasks are often interrupted before they can be completed, requiring attention at a later time.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 82. My job is very hectic.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 83. Waiting on work from other people or departments often slows me down on my job.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 84. My supervisor is concerned about the welfare of those under him/her.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ I do not have a supervisor

* 85. My supervisor pays attention to what I am saying.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ I do not have a supervisor

* 86. My supervisor is helpful in getting the job done.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ I do not have a supervisor

* 87. My supervisor is successful in getting people to work together.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ I do not have a supervisor

* 88. People I work with are competent in doing their jobs.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 89. People I work with take a personal interest in me.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 90. I am exposed to hostility or conflict from the people I work with.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 91. People I work with are friendly.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 92. People I work with encourage each other to work together.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 93. People I work with are helpful in getting the job done.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

Here are a number of personality traits that may or may not apply to you.

Please indicate the extent to which you agree or disagree with the statements.

You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

* 94. I see myself as extroverted, enthusiastic.

☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 95. I see myself as critical, quarrelsome.

☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 87. My supervisor is successful in getting people to work together.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree ☐ I do not have a supervisor

* 88. People I work with are competent in doing their jobs.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

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* 90. I am exposed to hostility or conflict from the people I work with.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 91. People I work with are friendly.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 92. People I work with encourage each other to work together.

☐ Strongly Disagree ☐ Disagree ☐ Agree ☐ Strongly Agree

* 93. People I work with are helpful in getting the job done.

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Here are a number of personality traits that may or may not apply to you.

Please indicate the extent to which you agree or disagree with the statements.

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* 94. I see myself as extroverted, enthusiastic.

☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
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* 95. I see myself as critical, quarrelsome.

☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 96. I see myself as dependable, self-disciplined.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 97. I see myself as anxious, easily upset.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 98. I see myself as open to new experiences, complex.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 99. I see myself as reserved, quiet.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 100. I see myself as sympathetic, warm.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 101. I see myself as disorganised and careless.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

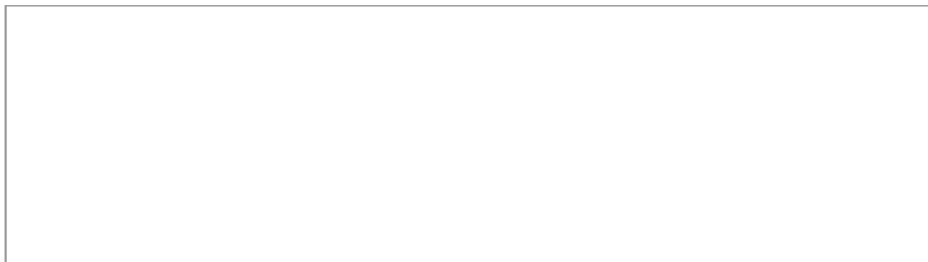
* 102. I see myself as calm, emotionally stable.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

* 103. I see myself as conventional, uncreative.

- ☐ Disagree strongly ☐ Disagree moderately ☐ Disagree a little ☐ Neither agree nor disagree ☐ Agree a little
☐ Agree moderately ☐ Agree strongly

104. If there is anything else you would like to add or any comments you would like to make on your work-family experiences and/or health, please place below.



Thank you for taking the time to complete this survey.

If you would like to enter the draw to **WIN 1 of 4 \$100 Coles/Myer gift vouchers** [click here to enter the draw](#). You will be directed to a separate page to enter your details.

You do not have to enter the competition, you can click DONE to exit this survey.

Thank you.